

CLAYTON 2000

GENERAL PLAN REVISION AND EIR

CITY OF CLAYTON

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James Parsons, Vice Mayor
Helen Allen, Councilmember
James McCormick, Councilmember
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Planning Director

Ann Tompach
Administrative Assistant

Greg Mattson
Graphics

GENERAL PLAN
- ADOPTED 7/17/85
REVISION TO GENERAL PLAN
- ADOPTED 5/6/87
GROWTH MANAGEMENT ELEMENT
- ADOPTED 6/2/92

HOUSING ELEMENT
- ADOPTED 11/16/93
GENERAL PLAN AMENDMENT
- ADOPTED 6/28/95

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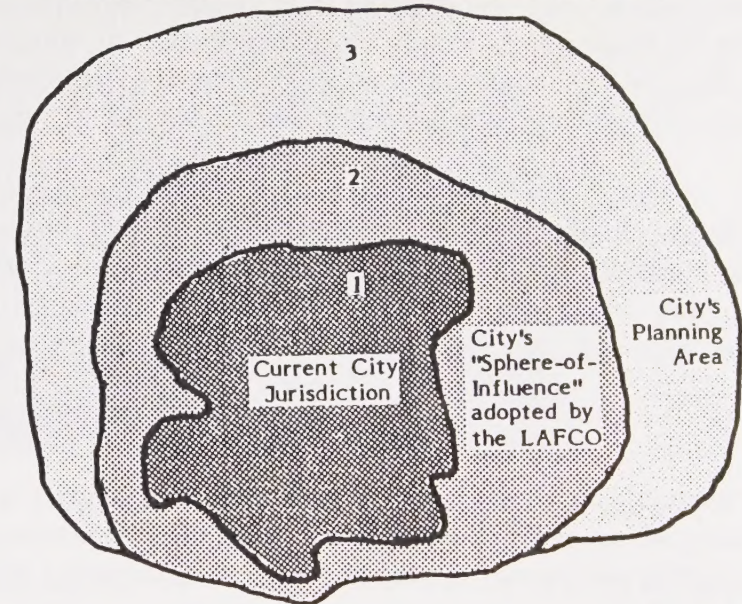
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Local planning and land use regulation rest on powers granted to cities and counties by the State Constitution, but state legislation shapes the manner in which these powers are exercised. Basically, cities and counties draw upon two broad categories of legal powers in their planning programs: corporate powers and police powers. Corporate power is the authority to collect money through bonds, fees, assessments, and taxes, and to spend it to provide services and facilities, such as streets, water, sewage disposal facilities, parks, recreation and the like.

Police power, reserved to the states by the Federal Constitution and delegated to cities and counties by Article XI, Section 7 of the California Constitution, is the authority to promote the health, safety, welfare, and morals of the public. The police power is elastic, evolving to accommodate changing community values, but its use is constrained by constitutional principles of equal protection and due process, including unlawful taking or damaging of property. Land use planning, zoning, subdivision regulation, and building regulation are all exercises of police power.

Planning occurs on three geophysical and political levels as illustrated in the following diagram:

Relationship of Clayton's City Limits,
Sphere of Influence and Planning Area



1. Incorporated Territory: Land use controlled by the City.
2. Unincorporated Territory: To be Ultimately annexed and served by the City. Land use controlled by County in formal consultation or by joint action with the City.
3. Unincorporated Territory: Not to be annexed and served by the City, but bearing some relation to the City's planning. Land use controlled by County in consultation with the City.

CLAYTON SETTING

The regional setting for the City of Clayton is indicated in Exhibit I-1. Clayton is situated in Central Contra Costa County southeast of the City of Concord. The planning area in Exhibit I-2 covers some 9 square miles or 5,800 acres. The City of Clayton, indicated in Exhibit I-2, occupies an area of approximately 4 square miles or 440 acres of the northwest portion of the planning area. The Clayton sphere of influence occupies approximately 6 square miles or 3,800 acres extending eastward from the area of development.

Both natural features and political divisions serve as boundaries of the Planning Area. The western boundary of the Planning Area is defined by the Concord city limits and ridge lines. The southern boundary is formed by the borders of the State Park. The north is bound by Ygnacio Valley/ Kirker Pass Road and the City of Concord. The east is bounded by ridge lines.

Development in the Planning Area is concentrated within and around the City of Clayton. The City of Concord (1984 population 104,000) lies to the north and west and is the service and employment center for area residents. Clayton Road, which becomes Marsh Creek Road southeast of Clayton, is one major transportation artery in the Planning Area. It leads northwest to Concord and southeast to Byron. Ygnacio Valley Road, which becomes Kirker Pass Road, is another main access route in the Planning Area. It runs southwest to Walnut Creek and northeast to Pittsburg.

Physical Description

The Planning Area includes a combination of physical features. The northwest and central portion is part of the Clayton Valley, while surrounding areas consist of hills and ridges. The City of Clayton occupies most of the flat bottomland.

The ridges in the northern portion of the Planning Area range in elevation between 1,000 and 1,400 feet. The southern ridges are more heavily forested and range up to 2,400 feet in elevation. Mt. Diablo, with a peak elevation of 3,849 feet, lies directly south of the Planning Area.

The Planning Area is part of the Mt. Diablo and Marsh Creek Watersheds, with the City of Clayton lying at the confluence of Mt. Diablo Creek and several of its sections of the Planning Area.

Institutional Setting

The City of Clayton is a general law city, governed under a structure and process established by California State Law. There are 5 elected Council members, one of whom serves as the Mayor. The City is served by a 5 member Planning Commission. The current city boundaries are indicated in Exhibit I-2.

The City of Clayton has direct authority for activity within its municipal boundaries. It has the comment authority of a responsible agency within its Sphere of Influence for actions taken by the County or other jurisdictions. The Clayton Planning Area is the area identified by the City of Clayton as that unincorporated area where actions will have a direct

Clayton General Plan Land Use Designations

LAND USE KEY

RESIDENTIAL/LAND USE	UNITS/NET ACRE
RE RURAL ESTATE	(.0 to 1)
LD LOW DENSITY	(1.1 to 3)
MD MEDIUM DENSITY	(3.1 to 5)
HD HIGH DENSITY	(5.1 to 7.5)
MLD MULTIFAMILY LOW DENSITY	(7.6 to 10)
CC CULTURAL CENTER	
ID INSTITUTIONAL DENSITY	
COMM COMMERCIAL	
TC Town Center	
KC KIRKER CORRIDOR	
CCV Convenience Commercial	

SCHOOL

IS INTERMEDIATE
ES ELEMENTARY
P PRIVATE

OPEN SPACE

PR PRIVATE
PU PUBLICPARK/OPEN SPACE
AG AGRICULTURE
Q QUARRY
PG PRIVATE/GOLF COURSE
TRAILS

CITY BOUNDARIES

CL CITY LIMITS LINE
SI SPHERE OF INFLUENCE
PA PLANNING AREA

Draft Revision January, 1995

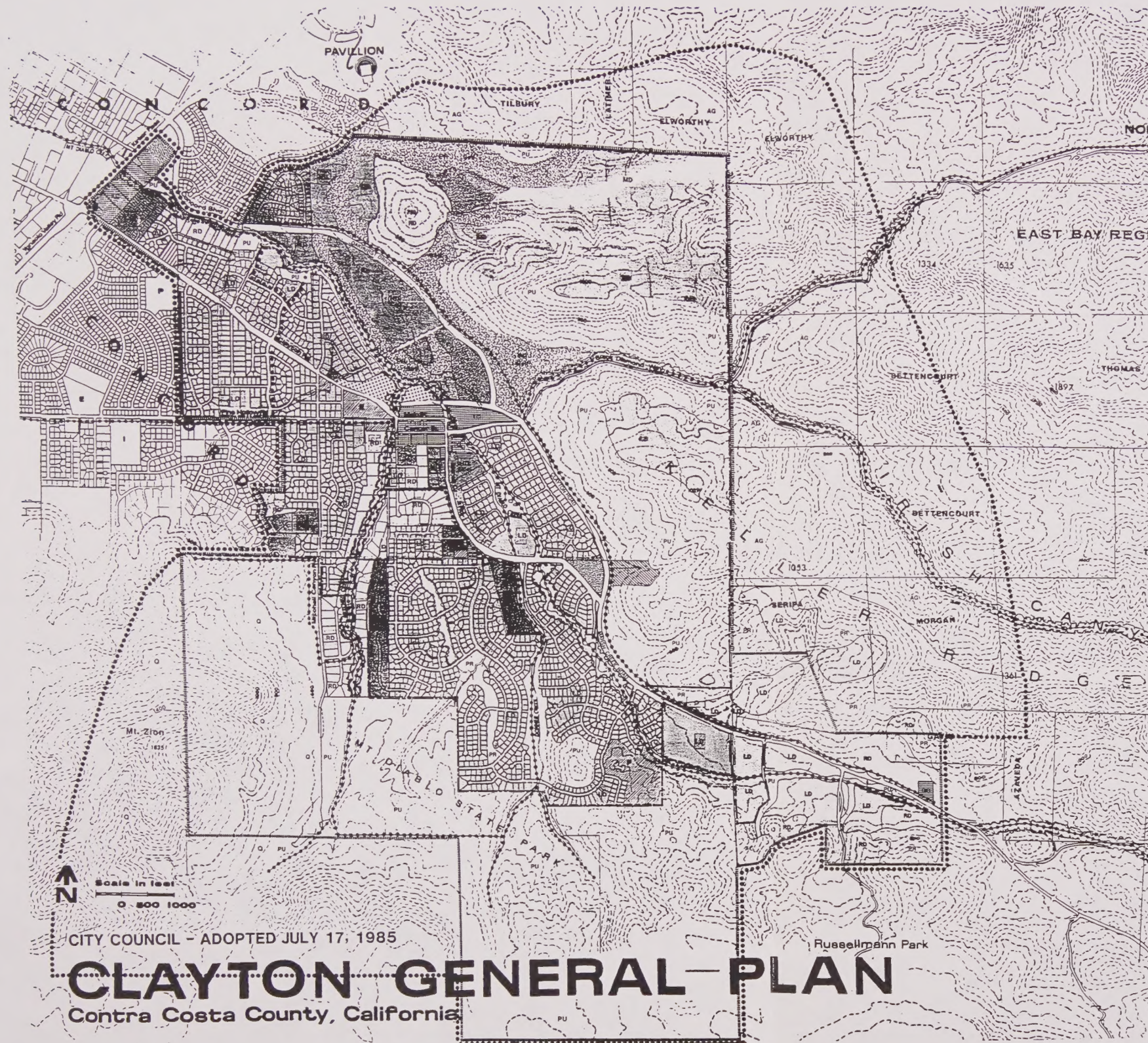


CLAYTON GENERAL PLAN AMENDMENT

CLAYTON
CALIFORNIA

BRADY AND ASSOCIATES, INC. PLANNERS AND LANDSCAPE ARCHITECTS

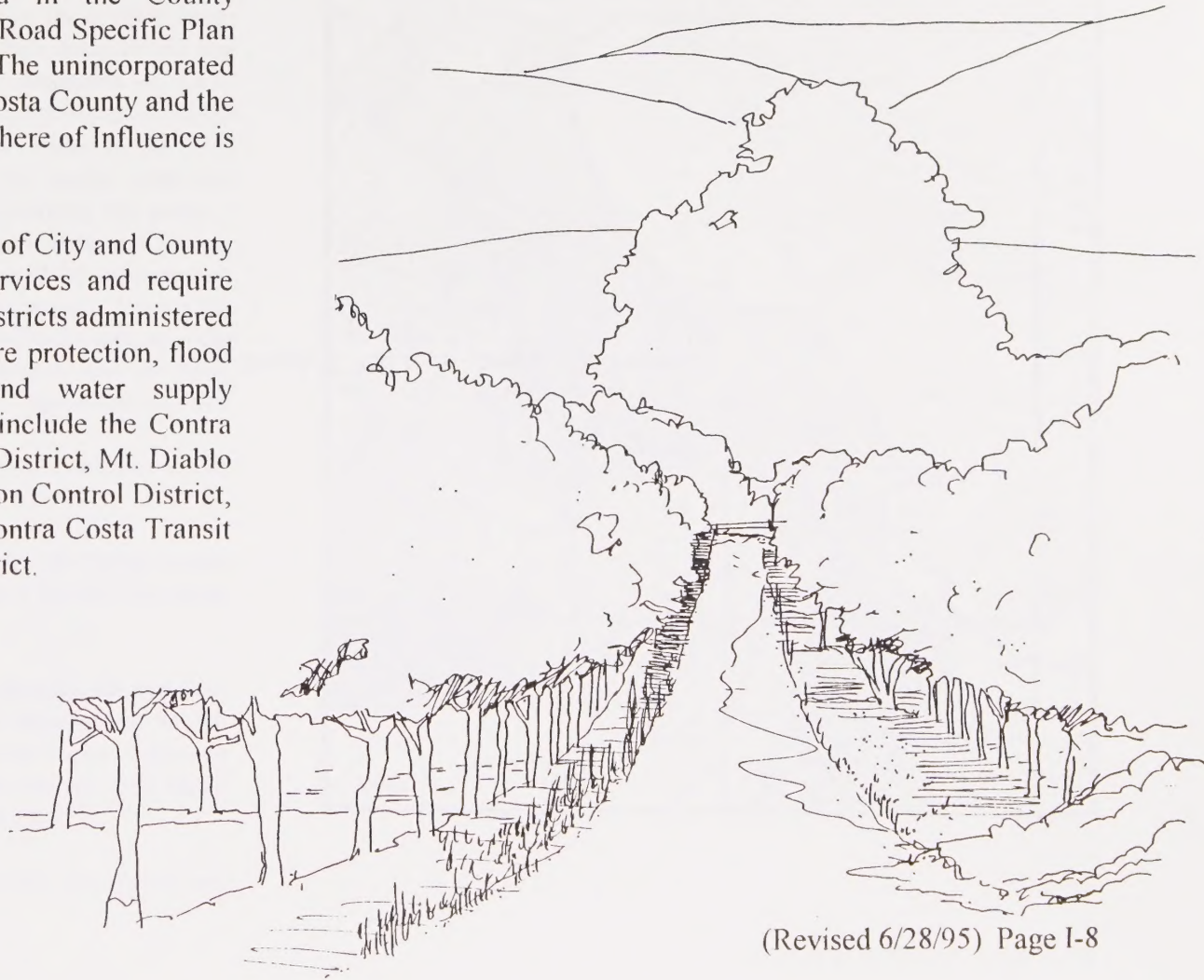
(Revised 6/28/95) Page I-6



effect on city conditions. From a geographical standpoint, development could increase downstream flow within the watershed; from an activity standpoint development would increase downtown traffic and from a political standpoint development could change the operation of a mutual special district.

The unincorporated sections of the Sphere of Influence fall into four categories: subdivisions approved in the County development proposed in the Marsh Creek Road Specific Plan area, agricultural lands, and quarry uses. The unincorporated lands fall within the jurisdiction of Contra Costa County and the Contra Costa Planning Department. The Sphere of Influence is indicated in Exhibit I-2.

Within the Planning Area there are a number of City and County special districts which provide special services and require residents to pay tax. These include special districts administered by the County through appointed boards, fire protection, flood control district, mosquito abatement and water supply maintenance. Other independent districts include the Contra Costa Water District, Central Sanitary Sewer District, Mt. Diablo Unified School District, Bay Area Air Pollution Control District, Bay Area Rapid Transit District, Central Contra Costa Transit Authority and East Bay Regional Parks District.



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4. Southern Pacific Pipeline Company had decided to remove their oil line through the hills in the regional park because of landslides.
5. Concord Boulevard was reviewed regarding potential earthquake fault movement.

The issues related to Keller Ranch were as follows:

1. In 1981 the county approved a General Plan Amendment for the Keller Ranch in response to a revised application for development. The number of dwelling units (a maximum of 1,400) planned for the Ranch was substantially higher than the 925 maximum planned by Clayton in 1979.
2. The Council, in response to an application for a more dense Keller development, approved a General Plan Amendment late in 1983 which would have allowed a maximum of 1,825 dwelling units. This amendment, which approximately doubled the maximum number of dwelling units permitted by the 1979 Plan for that property was referred to the voters under the California referendum process. After receiving the petition which was signed by 48.6% of the registered voters in Clayton, the Council reversed its decision and denied the amendment. Thus, the 1979 General Plan remained unchanged. During the referendum process, some residents and officials indicated the opinion, that while 1,825 units for the Ranch was too high, perhaps Clayton should restudy the 925 maximum number permitted under the 1979 Plan.
3. Portions of Clayton's Planning Area had not been previously studied in sufficient detail.

In 1987, a General Plan Amendment was adopted for the Keller Ranch property. The area has since incorporated into the Clayton City limits as the Oakhurst subdivision.

The General Plan planning area includes two fairly discrete use patterns: the urbanized area and a transitional area which includes the Marsh Creek Road Specific Plan area. Parcels along Marsh Creek Road east of the Regency Meadows subdivision have been heavily and fairly haphazardly parcelized, but still evince a rural character.

Lands along Marsh Creek Road east of the Clayton city limits are

dominated by natural topographic features of hillsides cresting along Keller Ridge to the north and hillsides sweeping up toward Mt. Diablo to the south. Development within the Marsh Creek Road Specific Plan area should provide a sensible transition between the urban and rural areas.

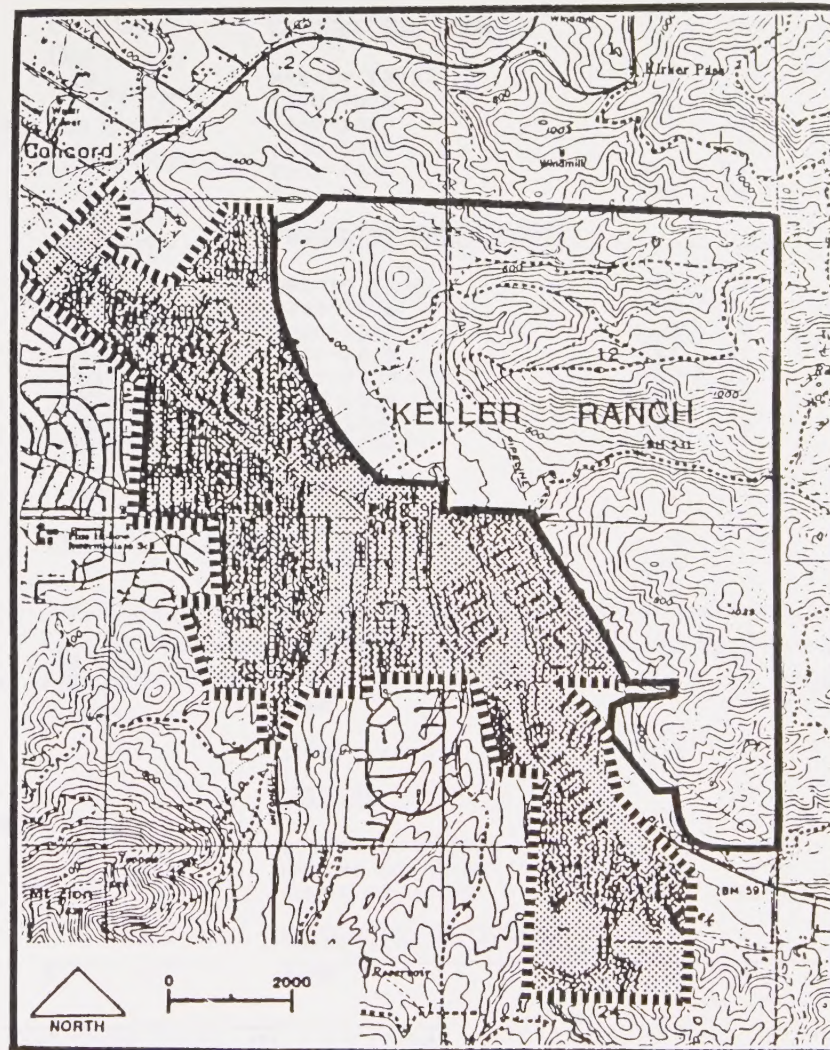


EXHIBIT I-5

POPULATION CHARACTERISTICS FOR THE CITY OF CLAYTON

<u>Item</u>	<u>#</u>	<u>%</u>	<u>Item</u>	<u>#</u>	<u>%</u>	<u>Item</u>	<u>#</u>	<u>%</u>
<u>TOTAL POPULATION</u>	4,235		<u>OCCUPATION (Cont)</u>			<u>POPULATION BY TENURE</u>		
Under 18	1,442	27	Service	138	7	Owner Occupied	4,059	93.8
Persons 18-61	2,698	64	Farming	19		Renter Occupied	266	6.2
Persons 62 or over	185	4	Precision Production	183	9	Median Occupancy		3.23
			Machine Operators & Assem	58	3			
<u>ETHNIC CHARACTERISTICS</u>			Transportation	42	2	<u>HOUSING</u>		
White	4,090	94.6	Handlers and Laborers	19		Total Units	1,377	
Non White	175	4.0				<u>Type</u>		
Hispanic	210	4.8	<u>INCOME</u>			1 Detached	1,254	91
<u>HOUSEHOLD CHARACTERISTIC</u>	1,329		Median Household Income	\$35,067		1 Attached	97	7
Married	1,137	85.6	Median Family Income	35,851		2	-	
Married with Children	719		<u>HOUSEHOLD INCOME</u>			3 or 4	8	
Female Head with Children	31		\$ 0 - \$ 2,499	20	1	5 or More	13	
Non-Family Household	98		2,500 - 4,999	8		MH	4	
Average Household Size	3.23		5,000 - 7,499	6		<u>Year Built</u>		
			7,500 - 9,999	28	2	1980-1984*	(162)	
<u>EMPLOYMENT CHARACTERISTICS</u>			10,000 - 12,499	24	1	1979-1980	132	9
Total Employed	1,835		12,500 - 14,999	31	2	1975-1978	686	49
Employed in Contra Costa	1,070	58	15,000 - 17,499	39	2	1970-1974	82	5
Work out of County	618	34	17,500 - 19,999	29	2	1960-1969	341	24
Work out of State	16		20,000 - 22,499	27	2	1950-1959	93	6
Not Reported	146		22,500 - 24,999	37	2	1940-1949	-	
Drive Alone	1,391	76	25,000 - 27,499	88	6	Before 1939	42	3
Carpool	351	19	27,500 - 29,999	87	6	<u>Length of Occupancy</u>		
Public Transportation	162	9	30,000 - 34,999	237	17	1979-80	249	19
Walk	21	1	35,000 - 39,999	205	15	1975-1978	742	57
Work at Home	44	2	40,000 - 49,999	224	16	1970-1974	93	7
			50,000 - 74,999	191	14	1960-1969	172	13
<u>TRAVEL TIME</u>			75,000 or More	48	3	1950-1959	20	1
Less than 15 Minutes	259	15	Families below Poverty	20	1	Before 1949	7	
15 to 30 Minutes	619	35	Families below Poverty			<u>Persons per Room in</u>		
30 to 60 Minutes	519	29	with Female Head of			<u>Households</u>		
Over 60 Minutes	385	22	Household	14	1	1:01 or Less Per Room	1,325	
						1:01-1:50	2	
<u>OCCUPATION</u>			<u>SIZE OF UNITS</u>			1:51 or More	2	
Executive	506	24	1 Room	0				
Professional	309	15	2 Rooms	2				
Technician	58	3	3 Rooms	9				
Sales	374	18	4 Rooms	40				
Administrative Support	340	16	5 Rooms	118				
Private Household	13		6 or More Rooms	1,208	87%			
Protective Service	55	3						

* Source City of Clayton
(4/80-12/84)

PUBLIC PARTICIPATION

The draft General Plan has been the product of two committees. The General Plan Committee was appointed to prepare the Land Use, Circulation, Safety, Open Space, Conservation, Community Design, community Facilities and Noise Elements. The Housing Element Committee was established to prepare the Housing Element. Each committee had a series of work sessions open to the public. The hearing process will include extensive notice and maximum community participation is anticipated.

General Plan Review Committee

Membership

James Parsons, Chairman
Carolyn Bovat
Ann Hall
Kenneth Johnson
Barbara Kendall
Greg Manning
David Mason
Lou Norberg
Dennis Romano

Meeting Schedule

5/23/84	7/31/84	10/10/84
6/5/84	8/8/84	10/24/84
6/13/84	8/14/84	10/30/84
6/19/84	8/21/84	11/12/84
6/27/84	8/29/84	11/16/84
7/3/84	9/4/84	11/19/84
7/11/84	9/12/84	12/3/84
7/17/84	9/19/84	12/4/84
7/25/84	9/26/84	

Housing Element Committee

Membership

Philip Tinsley, Chairman
Julie Gilchrist
Gary Gum
Dan Kasper
Bill Renewanz
Jim Shacklett
Gloria Utley

Meeting Schedule

5/15/84	9/7/84	12/13/84
6/19/84	10/30/84	12/17/84
7/11/84	11/5/84	1/8/85
7/17/84	11/15/84	1/10/85
7/28/84	11/28/84	
8/12/84	12/6/84	

POLICY INTERPRETATION

The language in this plan reflects the original text with amendments that have occurred since the Plan's adoption. Policy and text inconsistencies may exist within the document. In these cases, the policy language prevails.

PREAMBLE TO THE GENERAL PLAN GOALS AND OBJECTIVES

It is important to recognize that this General Plan describes the kind of city that Clayton intends to become. The Plan is the culmination of a legally defined process of citizen review, professional advice, public hearings, and adoption. The plan, subject to periodic review, is a living document which takes on meaning as it is translated into policies and regulatory ordinances.

When an amendment to the plan is considered, the proposed amendment must be considered in the context of the General Plan Goals and Objectives, and any such amendment must be shown to be consistent with them. These Goals and Objectives follow:

General Plan Goals

1. To maintain the rural character that has been the pride and distinction of Clayton.
2. To encourage a balance of housing types and densities consistent with the rural character of Clayton.
3. To preserve the natural features, ecology, and scenic vistas of the Clayton area.
4. To control development through appropriate zoning, subdivision regulations and code enforcement.
5. To provide a comprehensive, integrated, green-belt system, which includes bicycle, equestrian, and walking paths and is connected to regional systems.
6. To encourage a pedestrian-oriented community with areas of open space and recreational facilities for public use.
7. To enhance the sense of identity and pride in and to encourage historical awareness of Clayton.
8. To ensure an adequate commercial tax base for Clayton.
9. To create and maintain an attractive Town Center area and to make it the commercial, civic, and cultural focus for the community.



CLAYTON CITY HALL

LAND USE ELEMENT

Goal

To provide a mixture of land uses that responds to needs of the City of Clayton to the year 2000.

Residential

Objective 1

To retain the rural character of Clayton through a predominance but not exclusive use of single-family, low-density residential development balancing needs of the housing element and preservation of open space.

Policies

- 1a Establish density designations based on terrain, circulation, adjacent uses and area characteristics.
- 1b Identify a variety of densities, which decrease as slope increases.
- 1c Permit limited high-density areas.
- 1d Preserve historic structures and open space areas with uses such as community facilities, bed and breakfast facilities, or large single-family homes.
- 1e Encourage the clustering of development to preserve open space.

Objectives 2

To preserve the natural beauty and the feeling of openness in the community by preserving ridgelines and limiting development in the hills.

Policies

- 2a To prevent deterioration of scenic or sensitive areas, development should be clustered in less sensitive areas and an Open Space designation should be applied to undeveloped portions of parcels.
- 2b Promote mitigation measures that maintain the aesthetic quality of the hills in transition areas.

Objective 3

To establish boundaries for the City of Clayton that follow standard principles of urban design and municipal development.

Policies

- 3a Promote annexation of all land area within the City's Sphere of Influence, provided there is no drain on current City resources.
- 3b Encourage Contra Costa County to follow the example of Santa Clara County and other progressive counties in establishing policies supporting city annexation within spheres.
- 3c The City should review its Sphere of Influence at least every five years and request a boundary amendment as needed.

Commercial

Objective 4

To plan for and promote adequate commercial facilities to serve the needs of Clayton residents.

Policies

- 4a Expand the commercial tax base in appropriate areas.

4b Maintain the Town Center and the commercial areas of Kirker Pass Road and Marsh Creek Road as the sole areas for commercial development.

4c Require a master development plan for combination of parcels where appropriate.

Objective 5

To prevent strip development and other inappropriate commercial uses.

Policies

5a Review commercial development to ensure compatibility with surrounding uses and the environmental setting.

5b Provide strict control of nuisance characteristics of uses.

Major Developments

Objective 6

To promote development of the Keller Ranch within Clayton (See Appendix A).

Policies

6a Require a design constraints analysis prior to Keller Ranch development.

6b Review the design for Keller Ranch as a whole rather than a piecemeal process.

6c Incorporate or promote adoption of all reasonable mitigation measures for Keller Ranch development whether in the City of Clayton or in another jurisdiction.

Objective 7

To promote community amenities within the Keller Ranch development.

Policies

7a Support development of a country club facility that would include a golf course, tennis courts, swimming pool, clubhouse, restaurant, overnight accommodations and other uses deemed ancillary by the Planning Commission.

7b Support establishment of a Cultural Center that would permit uses that support historical heritage and community activity within the Town Center designation.

7c Support development of community playfields.

Objective 8

To direct development of Keller Ranch within appropriate areas as constrained by topography, visual corridors, geologic factors, water courses and other planning considerations.

Policies

8a Utilize map designation footprint to indicate development form.

8b Permit density transfer among residential development areas within the overall unit limit.

8c Designate Country Club and athletic field facilities as Open Space/ Facility.

8d Permit minor design deviation among residential development, open space, open space/ facility and commercial designation footprints through the Planned Development approval process.

DENSITIES

The General Plan map indicates application, location, extent, type and density of development. Designations provide assurance of city policy and guidance to homeowners, landowners and developers.

There are 7 designations. The acreages are based on the legal or gross acreage of the parcel. Maximum density cannot be guaranteed but density will fall within a range due to differences in sites.

When clustering is proposed for development, the City may provide relief from the lot coverage standards discussed below.

Unless otherwise noted, the following uses are allowed in each of the General Plan residential categories:

- Crop and tree farming and horticulture, not including the raising or keeping of any animals other than ordinary household pets;
- and publicly-owned parks and playgrounds.

Additional uses allowed under each category are described below.

Rural Estate (0 to 1.0 Units Per Acre)

This density range is intended for single-family estates, or horse set-ups on individual lots of an acre or more. Allowable uses include single-family homes, private stables and corrals with access to greenbelts and equestrian facilities, and accessory structures and uses normally auxiliary to them. The estate lots are limited to a development intensity of 30% parcel coverage of primary and accessory structures. This would include barns but not corrals. Development height is limited to 2½ stories and thirty five feet in height.

Low Density (1.1 to 3 Units per Acre)

This density range is intended for development of single-family houses on lots that range between 12,500 and 40,000 square feet. This designation has been the predominant density in Clayton. Development intensity will permit coverage of 25% of the parcel and construction up to 2½ stories and 35 feet in height. Uses allowed under this designation include single-family homes, and the accessory structures and uses normally auxiliary to them are also allowed.

Medium Density (3.1 to 5 Units Per Acre)

This density is intended for and allows planned unit development and single-family subdivisions. Development will range from a standard single-family subdivision to a zero lot line or single-family home. Accessory structures and uses normally auxiliary to them are also allowed. Development intensity is permitted up to 30% parcel coverage in a standard subdivision and up to 50% where common open space is provided. Development is permitted to a height of 2½ stories and 35 feet in height.

High Density (5.1 to 7.5 Units Per Acre)

This designation is an urban single-family density that will allow patio homes, zero lot line and cluster homes in a PUD development. Development will require innovative design with a combination of development concentration and open space. Development intensity will permit individual parcel coverage of up to 75% provided common open space is provided. Development excluding recreational amenities shall not exceed total structural land coverage of 25%. Structures shall not exceed 2½ stories and 35 feet in height.

Multifamily Low Density (7.6-10 Units Per Acre)

This designation is intended for and allows cluster units such as townhouses, garden units, and other types of PUDs that provide a development with amenities to balance the increased density. This density must be adequately buffered from single-family and estate development. Development intensity can reach 100% of individual parcel coverage provided that each unit has access to private outdoor space, use of outdoor recreational amenities, and provision of useable open space. Structural coverage, excluding recreational amenities, shall not exceed 30% of the site area. Structure height shall not exceed 2½ stories or 35 feet in height.

Multifamily Medium Density (10.1 to 15 Units Per Acre)

This designation is intended for and allows multifamily units located where the site area, circulation system and other features can comfortably accommodate increased density. Development within this density shall be required to use a PUD concept and standards with incorporation of significant design and amenity in the project. Development intensity can reach 100% of individual parcel coverage provided that each unit has access to private outdoor space and use of outdoor recreational amenities. Structural coverage, excluding recreational amenities shall not exceed 40% of the site area. Structure height shall not exceed 2½ stories or 35 feet in height.

Institutional Density

This designation is intended for development of various forms of elderly housing under sponsorship of public or quasi public agencies. The density of elderly projects is not always equivalent to standard concepts of density; therefore, a density range of 7.6 to 20 units per acre may be permitted. Group dining, limited vehicles, medicine-dispersing services and other characteristics make this form of housing unique.

Senior projects must be submitted as planned developments and will have to be reviewed for site limitations including density on a case-by-case basis. It is assumed that densities can exceed 15 units per acre when possible impacts can be mitigated. Development intensity can reach 100% structural coverage of each individual parcel. Structural coverage shall not exceed 50% of the site area, however, specific sites and relationship to adjacent uses may pose additional limitations.

Residential Density and Population Projections

The 1980 census indicated that Clayton had an average population of 3.23 persons per unit for occupied units. The California State Department of Finance indicated the person per unit for all units was 3.14. Clayton's high occupancy rate compared to other cities in Contra Costa County is due to the large homes on large parcels. As homes decrease in size, occupant size can also be expected to decrease.

The analysis of the relationship of units per acre to population is not direct. Population is based on the relationship of residential unit size and living pattern of residents. Generally the size of the units will indicate the number of bedrooms. Variables include the reduced size of the family, larger homes on smaller lots, ethnic and cultural preferences for family size and use of space, economic fluctuations, percentage of unmarried shared rent households and changes in taste. The projected population levels are as follows:

<u>Designation</u>	<u>Persons Per Unit</u>
Rural Estate	3.3
Low Density	3.1
Medium Density	2.8
High Density	2.5
Multifamily Low Density	2.3
Multifamily Medium Density	2.1
Institutional	1.2

OPEN SPACE DESIGNATIONS

The City of Clayton seeks to preserve open space and provide recreational opportunities to Clayton residents within the City limits. Four designations have been created to fulfill these goals: Private Open Space, Public Park/ Open Space, Quarry, and Agriculture. The following text describes these four categories:

1. Private Open Space (PR)

This designation includes privately-owned open spaces. Typical examples in Clayton include the Oakhurst golf course and areas where development has been clustered to retain open space. Other examples include private recreational facilities such as the riding club southeast of Clayton, the swimming pools at Marsh Creek Park Villas and Dana Hills, and the open space within Dana Hills and Westwood. These facilities allow individuals to expand their recreational opportunities at cost and benefit to the users rather than the public at large. Such facilities should be promoted so long as traffic, noise and other related impacts are mitigated.

Only open space development, recreation and preservation are allowed in this designation. Owners' potential rights to other types of development on these properties have been clustered on adjoining parts of some parcels.

2. Public Park/Open Space/Open Space and Recreational (PU)

This designation applies to lands under City, County or State jurisdiction. Such uses within the planning area include City-owned open space areas and developed neighborhood and community parks, creek corridors, Mt. Diablo State Park, and the Open Space areas within the Oakhurst subdivision (dedicated to the City). Allowable uses in this designation include trails, greenbelts, playfields and parks, as well as accessory structures and uses normally auxiliary to them.

3. Quarry (Q)

Uses allowed under this designation include quarries and accessory structures and uses normally auxiliary to them.

There are no quarries located within the City limits of Clayton; however, the Lone Star quarry is located on the southwestern edge of the community. The quarry produces high quality rock and gravel and the quarry has an expected life in excess of 50 years. There are two negative impacts generated by quarry operation. First, there are occasional blasts to separate the rock and secondly, there is an average of 160 trucks per day travelling along Mitchell Canyon Road. This figure is based on information obtained from Lone Star Quarry. The quarry has taken a series of measures to mitigate its effect upon Clayton.

4. Agriculture (AG)

Areas to the northeast and east of the City limits include rugged terrain that is primarily used as rangeland for livestock and other similar open uses. The City supports and encourages the continuation of agriculture in these areas. Given the low intensity of agricultural activities, the minimum parcel size is 20 acres but is encouraged to be 40 acres to ensure agricultural viability.

The purpose of the Agriculture designation is to preserve and protect lands capable of and generally used for the production of food, fiber, and plant materials. The title is intended to be descriptive of the predominant land-extensive agricultural uses that take place in these areas, but the land use title allows other types of agricultural, open space or non-urban uses.

NEIGHBORHOOD DESCRIPTION

The extent of identification of Clayton residents with their City and their neighborhoods is very strong. Most identification is based on subdivision names provided by the developer, including Easley Estates, Regency Woods, Silvercreek, Jeffry Ranch, Southbrook, Glen Almond, Marsh Creek Park Villas, Briarwood, Mitchell Canyon Estates, Dana Hills and Diablo Downs.

Old town is an identification that does not refer to a specific geographical area but generally to development of individual custom homes prior to incorporation.

The term neighborhood has different meaning depending upon the geographical region. In large cities a neighborhood may be 40,000 people in size and include full commercial, industrial and institutional autonomy. In other areas a neighborhood may be a series of blocks bound by geographical landmarks or ethnic characteristics. The Census Bureau combines census tracts in rectangular patterns based on numerical ranges and physically defines areas by roadways and city limits.

In Clayton the term neighborhood is used for subdivisions. The uniting factors among neighborhoods is the period of construction, the style of housing, the price range of housing and common circulation and land use issues. There does not appear to be any significant distinguishing features among the neighborhoods except location.

Due to the size and character of the City, there is no need for neighborhood analysis or programs for specific neighborhood improvement. Neighborhoods as described above are indicated in Exhibit II-4.

COMMERCIAL DESIGNATIONS

In the 1979 General Plan there were three commercial designations, Town Center, convenience and office. In this revision the commercial designations have been changed to the following: Town Center, Kirker Corridor and Convenience Commercial.

Town Center

This designation is located in the center of the City of Clayton which has been a historical commercial center since Clayton's inception.

Uses

The uses permitted within this designation shall include retail sales establishments for antiques, art, auto parts, books, bicycles, business equipment, clothing flowers, hardware, hobby and craft, home furnishings, jewelry, music, nursery, liquor, records, sporting goods, toys, winery sales and similar products. Retail service establishments shall include animal grooming, appliance repair, bar, blue printing, cafe, exercise gym, gardening, home furnishing, period style hotel, photography studio, restaurant, saddlery, shoe repair, television repair, and similar establishments.

Offices shall include answering services, business and professional, engineering, financial institution, medical or dental, public and quasi public, veterinarian, and related offices.

Assembly uses shall include art studios, business schools, meeting halls, schools of physical instruction and similar facilities.

Temporary and seasonal outdoor uses shall include Christmas tree lots, displays, pumpkin patches, sidewalk sales, and similar uses.

Town Center commercial will permit a mixture of office and retail and second story residential. In all uses, new establishments shall be reviewed for design compatibility with existing structures, theme, and character of Town Center. Development intensity shall not exceed 35% structural coverage of the site and height shall not exceed 40 feet. Residential population shall be estimated at 1 person per 600 square feet.

Additional Town Center discussion may be found in the Community Design Element and the Town Center Design Standards Appendix.

Kirker Corridor

Kirker Corridor represents the only commercial location in the City limits of Clayton that has regional potential. Nearly all of Clayton's sales tax dollars are lost to neighboring communities. The Kirker Corridor represents a series of sites that can serve to recapture a portion of that lost income, provide local control over the types of shops and facilities needed and reduce the extent of travel to commercial centers further away. The primary emphasis is on retail facilities although the complementary office and retail service uses are necessary for variety and market balance. Structural coverage may not exceed 30% of the site and height may not exceed 3 stories and 50 feet.

Uses

All uses permitted in the Town Center. In addition, the following shall be permitted: auto sales and service, hotel and motel, wholesale distribution and other commercial uses determined to be consistent with the designation and overall development.

In order to prevent the Kirker Corridor from becoming a strip commercial site or to limit potential for future development, it will be

necessary to present any specific proposal within the context of concept master plans for the entire area covering issues such as circulation, architectural design theme, and site planning.

Convenience Commercial

This designation is highly restricted and designated for those sites that provide specific commercial needs for the community. Currently there are two sites along Marsh Creek Road where such uses exist; a landscape nursery exists near the town center, and a general store operates in the Marsh Creek Road Specific Plan area. This designation allows retail uses of a neighborhood convenience nature where facility and operation are compatible with surrounding residential areas. Land use intensity permitted on these sites are a structural coverage of 25% of site area and height limited to 2½ stories and 35 feet.

Implementation

Implementing ordinances shall be developed to guide and control use and appearance for all commercial designations. Development in the Kirker Corridor shall produce a unified concept.

The size of Clayton and its commercially designated area provides a series of limitations on the extent of uses that can be permitted. Uses that do not fit into the categories mentioned, such as mini-warehouse, contractor yards and non-office industrial uses, may have to locate elsewhere due to the severe space limitations.

ANNEXATION AND ULTIMATE BOUNDARY

The City of Clayton will never rival Concord or Walnut Creek in size; however, Clayton wishes to have control over those areas that demand services, that make up its urban form, that affect its livelihood and that help create an efficient unit of government services. It is therefore the policy of the City of Clayton to annex all land within its Sphere of Influence and to promote development of land in the City of Clayton. Cities across America have consistently demanded control over development that directly affects their limits. Most of the country recognizes the need for cities to be the predominant location of residential development, the standard-setter and the urban service provider. Many counties in California have accepted this concept.

Support for the concept of City development is included in the scale of community responsiveness to need, efficiency and consistency of standard. It is no coincidence that so many unincorporated communities have recently chosen to incorporate.

The Sphere of Influence and Planning Area boundary should be reviewed at least at 5 year increments to determine whether expansion is warranted.

If development is proposed in the unsphered area north or east of Clayton, Clayton will request expansion of its Sphere of Influence at that time to the limits of its Planning Area.

The City of Clayton will be interested in any development along Marsh Creek Road between Clayton and Byron, due to the direct effect on traffic through the City. The effect on Clayton circulation should be considered in any County proposal.



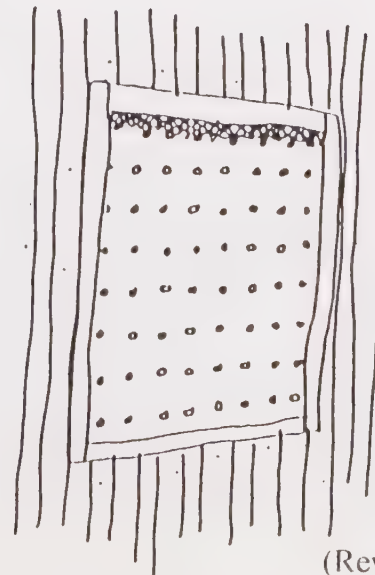
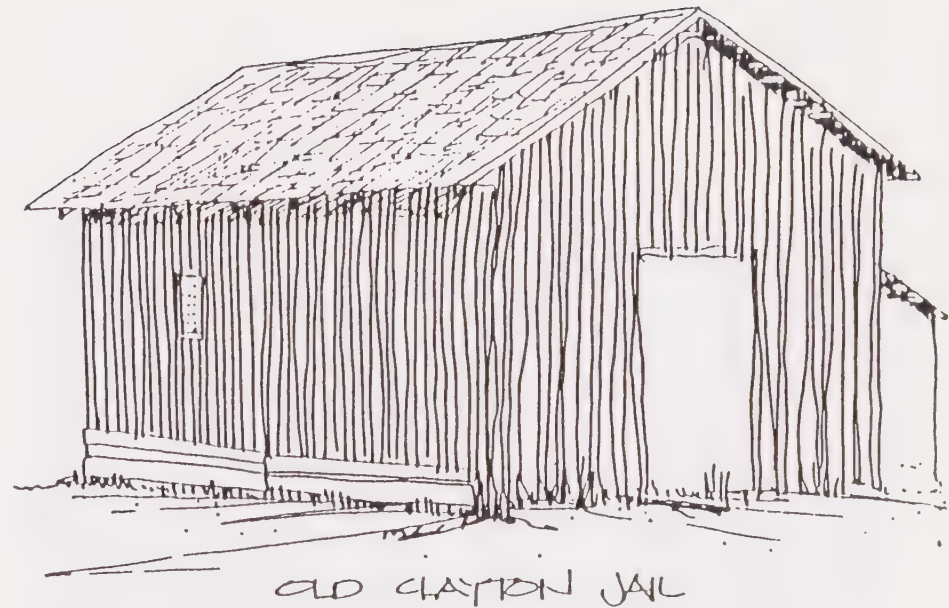
PUBLIC AND QUASI PUBLIC FACILITIES

This designation applies to public and private school facilities, city facilities, fire district and other public and quasi-public use. Day care facilities shall be consistent with this designation.

In the event that the fire station moves to another site the City of Clayton should make every effort to acquire the old facility for conversion to library or other community use.

The other potential institutional facility is the seminary, although it has been used for non-congregational religious operation. If new construction on the seminary site is proposed, a comprehensive architectural redesign of the facility should be considered. The purpose of such a redesign would be to bring the architecture into harmony with its setting. Specific uses can vary from a private school to facility for a public agency to a care home for the elderly. Any proposal will be considered in terms of the potential effect on the surrounding residential area.

New public facilities should be located so that they will not intrude on residential areas. Where a public facility must be located adjacent to residences, all feasible mitigation measures shall be considered at a public hearing prior to approval.



JAIL WINDOW:
PERFORATED BROILER
PLATE

Exhibit II-2
Neighborhoods

1. Westwood
2. Southbrook
3. Silver Creek
4. Clayton Greens
5. Glen Almond
6. Jeffry Ranch
7. Old Town
8. Mitchell Canyon Estates
9. Briarwood --- Easley Estates
10. Easley Estates Briarwood
11. Marsh Creek Park Villas
12. Regency Woods
13. Dana Hills
14. Dana Ridge
15. Diablo Downs
16. Yosemite Circle

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- 9c Provide systematic upgrade of streets and roads to applicable standards.

Objective 10

To support the establishment and expansion of public transit and carpools.

Policies

- 10a Participate in County-wide and area carpool/van pool programs.
- 10b Assist in location of permanent and temporary park and ride locations.
- 10c Provide free City application processing for park and ride lots on vacant parcels.

Implementation Measures

1. Prepare cost and benefit analysis of Town Center route alternatives.
2. Prepare a safe route to school map which is integrated into the circulation plan.
3. Establish a sign program for the green-belt trail system.
4. Provide an analysis of roads in Clayton and establish a continuing infrastructure improvement program.
5. Identify potential park and ride lots.
6. Determine roadway construction standards.
7. Develop street standards for grade and section.
8. Encourage development of bus pullouts, shelters and benches.
9. Review off-site circulation needs and fee structure to adequately mitigate the effect of new developments.
10. Support discussions with Concord regarding off-site mitigation, fees and standards in Concord.
11. Identify emergency crossing and pedestrian access crossings to the Silver Creek II area.
12. Install appropriate street and intersection design methods to protect non-arterial streets from through traffic.
13. Use where appropriate the authority given the City by various vehicle code sections to prohibit use of certain commercial vehicles exceeding specific maximum gross weights or oversized or excessively noisy vehicles from using designated residential streets.

Circulation Setting

The City of Clayton is situated in a regional circulation system indicated in Exhibit III-1. In the regional context the arterials in the Clayton area are Ygnacio Valley-Kirker Pass Road and Clayton Road. These roads carry most of the commute traffic from east Concord and the Clayton area to Interstate Route 680 and State Route 24 for destinations in downtown Concord, Walnut Creek, Martinez, Pittsburg, Antioch, Alameda County and San Francisco. Concord Boulevard also serves to carry commute traffic, but does so for lower volumes. At present, Concord Boulevard south of Kirker Pass Road changes its name to Oakhurst Drive at Clayton's City limits. This road connects with Clayton Road.

Clayton Road carries traffic to downtown Clayton from State Route 24 in Concord. Marsh Creek Road carries traffic to Clayton from residential developments and ranches to the east between Clayton and Brentwood. Marsh Creek Road is primarily a rural facility. Clayton and Marsh Creek Roads meet both in the Town Center (where Marsh Creek Road ends) and adjacent to the Diablo View Middle School (where Clayton Road ends and Marsh Creek Road turns to the Town Center).

Other important roads in Clayton are Pine Hollow and Mitchell Canyon. Pine Hollow Road is a two-lane residential street that has been widened to four lanes to serve new subdivisions. It often serves as a bypass to the Ygnacio Valley - Clayton Road intersection, a use the City of Clayton would prefer to discourage because the road is not designed for such use and because heavy bypass traffic would adversely affect a large number of residents whose properties front directly onto the road. Mitchell Canyon Road carries heavy truck traffic to and from the local quarries at times. The number of tandem gravel trucks travelling on Mitchell Canyon Road and Clayton and Pine Hollow Roads depends upon the amount and location of construction activities in the

surrounding areas and time of year. Truck travel is greatest during the dry season.

Capacity Terms

Discussion of traffic capacity is an indication of how well the circulation system serves area land use. The four common measures of traffic efficiency are as follows:

- a. Average Daily Trips - This measures either the vehicle trips generated per residence (10-15 depending on the size of unit) or the number of cars passing over a stretch of roadway during a certain period of time.
- b. Peak-Hour Trips - This measures the number of cars passing per hour and normally representing the worst case on a roadway. Afternoon peak hour (4:00-6:00) appears to be the heaviest usage of the area's circulation system. Morning peak hours (6:30-8:30) is approaching the same level of volume. The peak hour normally carries 10% of daily volume. If the Clayton peak hours proportion is extended to the entire commute hours of 6:30 to 9:00 a.m. and 4:00 to 6:30 p.m., over 30% of the daily usage will be accounted for leaving 70% of the traffic dispersed over 19 hours. The capacity of system is judged by peak response. In transportation planning the expansion of the peak period or dispersal of peak traffic is sought to improve system function at capacity. Reduction of peak commute hours through work staggering and flex-time will allow more efficient use of the road systems. Otherwise costly methods of road expansion and improvement of flow become necessary.

least 800 feet, and use four-leg intersections rather than "Tee" intersections wherever possible. The site plan reflects this type of planning and would help divert traffic from Clayton Boulevard and downtown Clayton.

- f. South of the Marsh Creek Road extension, Concord Boulevard should be a two-lane road. Reserve sufficient right-of-way for a four-lane road in case additional lanes are required in the future.
- g. Make the Marsh Creek Road extension south of Main Street four lanes and provide turning lanes at each intersection in order to provide adequate traffic flow.
- h. Place traffic signal hardware at the Marsh Creek Road-Concord Boulevard intersection. A signal will probably be necessary when Keller Ranch is fully developed.
- i. Increase the curvature of residential roads to produce a more serpentine alignment with curve design speeds not over 25 miles per hour. This would promote lower speeds and preserve the residential character of the streets.
- j. Design all roads to have grades of 15% or less. Exceptions to this standard in hillside areas should be evaluated on an individual basis and should be for the shortest length possible.
- k. Black Diamond Way should be included on the Preliminary Development Plan as a hiking, riding and bicycling trail. This roadway would need to be removed from the Contra Costa County Major Roads Plan in order to be in conformance with the adopted County General Plan amendment for the Keller Ranch area.

- l. Implementation of all mitigation measures listed in this section would be necessary at buildout of Keller Ranch. However, many would be needed during the course of development, depending on project phasing. The City should require the developer to submit a proposed phasing schedule for improvements that is consistent with the phasing schedule for project development.
- m. The northern Contra Costa County area, including the cities of Concord, Walnut Creek, Martinez, Pittsburg, Antioch and Clayton is in need of an area-wide traffic, transportation and land use study. All of these cities are growing, and the traffic impacts from one city are usually felt by the others. Improvements that may be in the best interest of one city may not facilitate the best overall area traffic system. Many of the transportation related issues that will affect some or all of the cities are beyond the capacity of a single-project EIR to answer. It is therefore recommended that an area-wide study be conducted to coordinate future traffic plans among all responsible government bodies. The following issues should be looked at in the study:
 - Alternative transportation corridors to Ygnacio Valley Road. It will be impossible to keep mitigating traffic problems along this one roadway.
 - Development of new employment centers east of Concord to shift present area-wide travel patterns. This may be the only method to reduce or maintain existing peak hour, peak direction traffic flows on the local roads.

Funding currently does not exist, nor will it probably exist in the future, to provide enough transit service to reduce auto volumes to any measurable extent.

- Improved signalization coordination and intersection improvements based on cooperative area-wide traffic flow strategy rather than on a separate city-by-city basis.

Change to the previous comments were recommended by the City of Concord:

1. West of Kirker Pass, Clayton Road has been expanded to 6 lanes while Concord Boulevard is only 2 lanes. Traffic should be directed away from Concord Boulevard and on to Clayton Road.
2. Crossings of Mt. Diablo Creek at El Camino, Lydia Lane and Mitchell Canyon Road should be considered or at least emergency crossing of emergency vehicles, pedestrians and bicycle paths.
3. Additional left-turn lanes are necessary at the intersection of Clayton Road and Ygnacio-Kirker Pass Roads.

An updated traffic analysis will be necessary to supplement peak traffic analysis in order to include one-way volumes for both a.m. and p.m. peak hours.
4. Revised recommendation is made for improvements between Kirker Pass and Ayers Road.
5. Recommend use of Concord fee structure for use in Clayton to mitigate downstream traffic.

6. Consideration by Keller Ranch development of effect on Concord Boulevard and Denkinger Road intersection.

Prior to decision on circulation improvement and mitigation of costs due to any new project, the cities of Concord and Clayton will need to meet and resolve the issues raised. This process should begin prior to approval of any significant traffic-generating development.

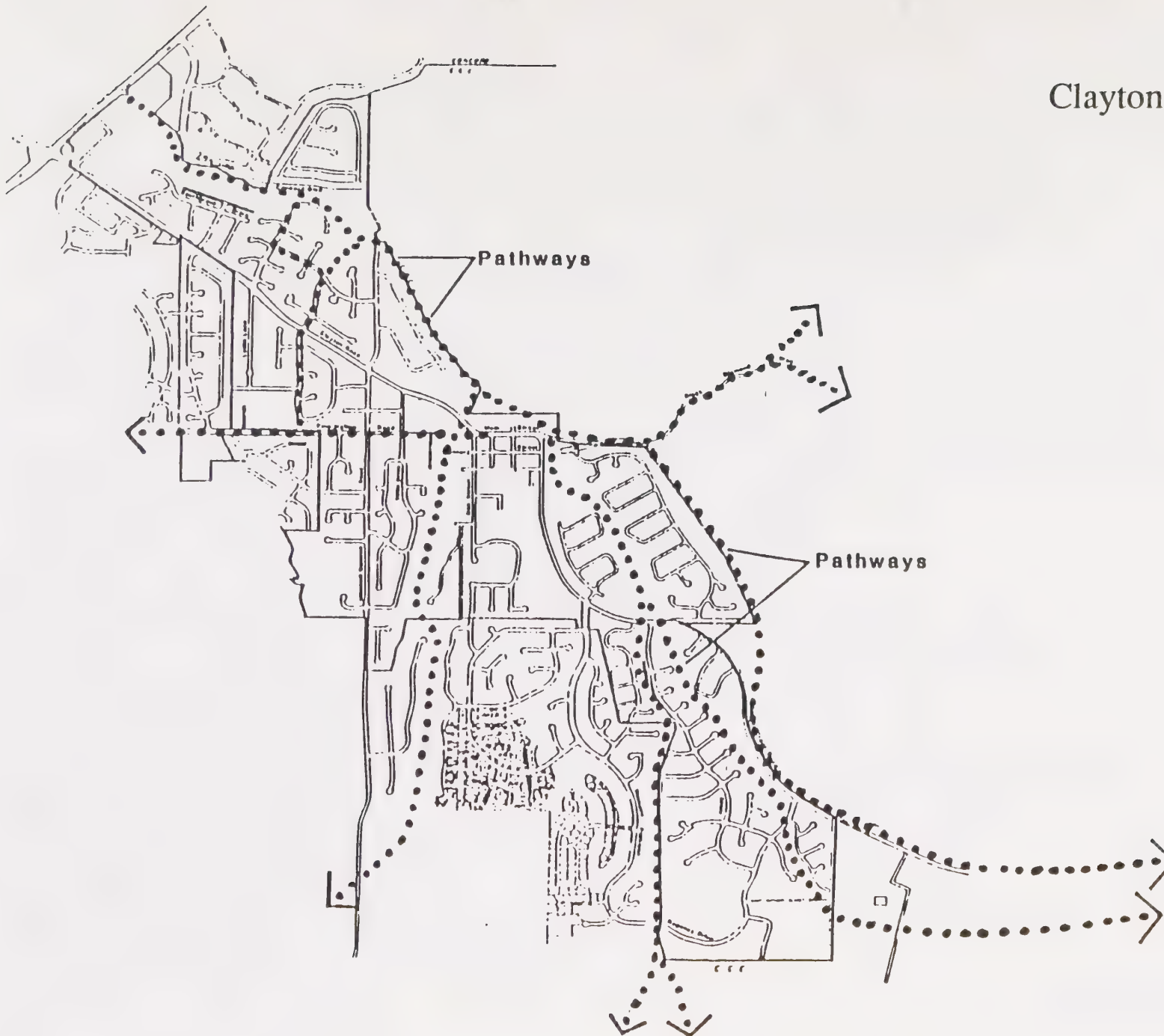
Clayton Street System

Clayton street and pathway system is indicated in Exhibit III-6. The system consists of arterial collector streets, local streets, private streets, cul-de-sacs and greenbelts. There is 20.6 miles of roadway. They are described as follows:

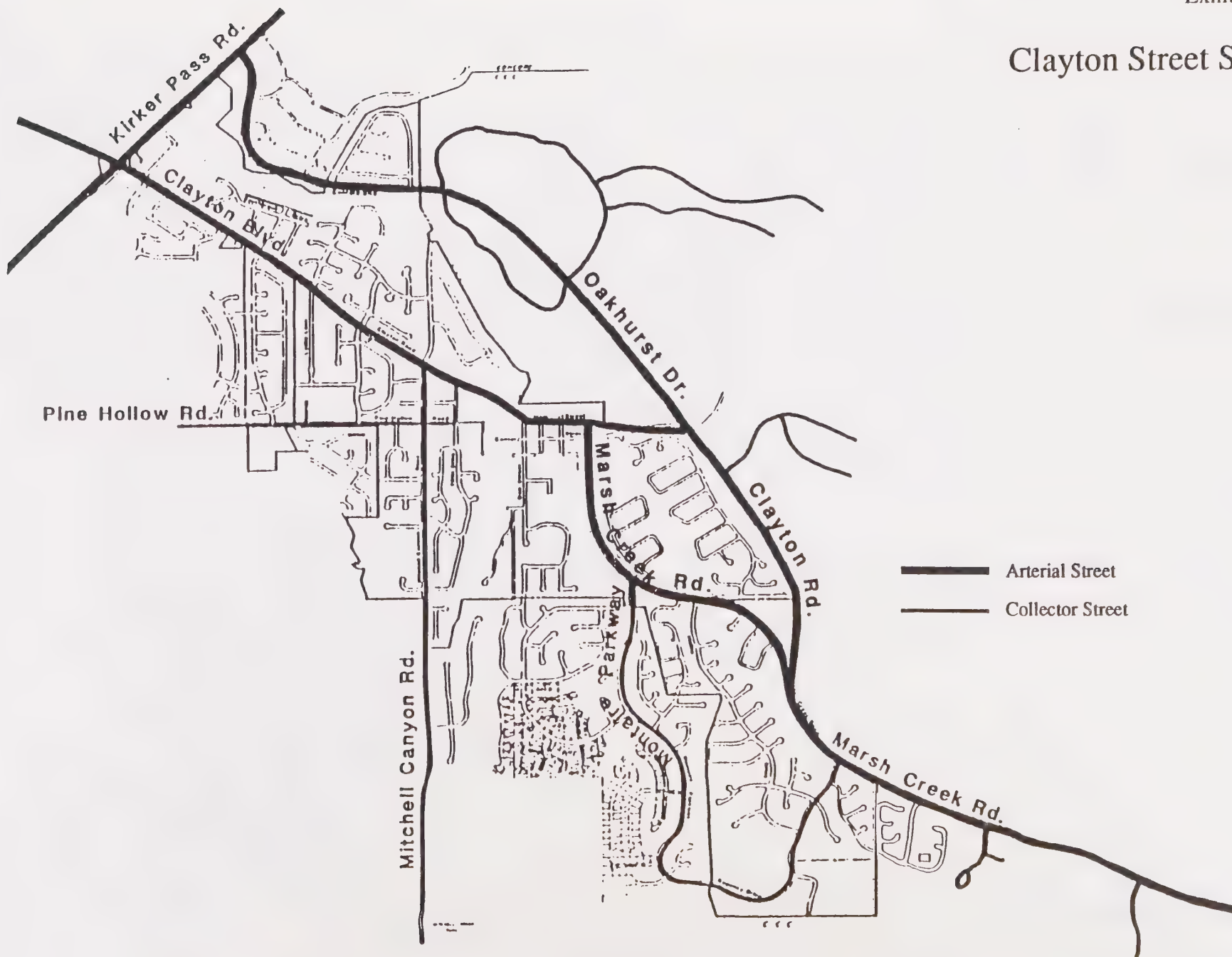
Arterial streets such as Clayton Road, Kirker Pass Road, Marsh Creek Road and Oakhurst Drive are designed to carry traffic through a city or from one major area to another within a city. Specific provisions, such as striping or grade separated lanes are required for non-motorized vehicles.

Collector streets such as Washington Boulevard, Mitchell Canyon Road and El Molino Drive provide a direct connection between arterials and local streets and also provide access to activity centers such as schools, parks, and shopping centers. Specific provisions may be required for non-motorized vehicles.

Clayton Street System



Clayton Street System



Local streets such as Tiffin Drive, Lydia Lane and Weatherly Drive are typically two-lane streets which provide direct access to individual residential lots. These types of streets are not shown on the circulation plan. Local streets may be through or may dead end. Streets that will eventually go through should be posted with signs to prevent confusion.

Private streets such as Clark Creek Circle, have been developed as part of a private residential development. The streets are not built to City standard and must be maintained by the homeowners.

Cul-de-sacs such as Marquette Court, Nottingham Place and Malibu Court are not intended to go through; however, they must provide adequate turn-around.

Greenbelts found along Mt. Diablo, Peacock, Donner and Mitchell Creeks provide circulation through the community for pedestrians, horseback riders and bicycle riders.

Standards of Construction

Exhibit III-7 indicates standards under which Clayton streets should be developed.

These streets were developed at various times and some lack curb, gutter and sidewalk improvements. The City intends to upgrade all City streets to full City standards depending on available funding. However, within areas that provide a transition from suburban to agricultural uses, street standards may vary to reflect the rural conditions. Specific Plans, conditions of approval and similar documents will define street standards within these transitional areas.

Financing Improvements

The most likely sources of financing for circulation system

improvements, proportionate to effect, consist of project contributions from the development of Keller Ranch, Kirker Corridor and smaller projects proposed within the Sphere of Influence. In addition, establishment of a redevelopment agency can help fund needed circulation improvements not covered by fees.

ALTERNATIVE TRANSPORTATION MEANS

Transit

The City of Clayton is serviced by the Central Contra Costa Transit Authority (CCCTA). The current bus route is indicated in Exhibit III-8. Bus stop and shelter locations are also indicated.

A recommendation for the service improvement in the future would be a Bart shuttle from various points of Clayton at peak hour as demand warranted.

Park and Ride Lots

There are no park and ride lots in Clayton at present. However, it will be worthwhile to contact churches and other institutions and facilities with large minimally used parking lots for park and ride locations.

Van Pools and Car Pools

There are van pools and car pools currently operating in Clayton. It will be beneficial to assist in providing coordination of carpool formation and matching for local residents.

1. Introduction

1.1. Overview

The purpose of this study is to investigate the effects of various factors on the performance of a system. The study is divided into two main parts: a theoretical analysis and an experimental investigation. The theoretical analysis focuses on the development of a model that can predict the system's behavior under different conditions. The experimental investigation involves the design and execution of experiments to validate the model and to determine the range of parameters over which the model is applicable.

The results of the study are presented in the following sections. The first section discusses the theoretical model, while the second section describes the experimental setup and the results of the experiments. The final section provides a summary of the findings and discusses the implications of the study.

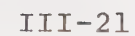
2. Theory

2.1. Model Development

The model is developed based on the following assumptions: (1) the system is a closed system, (2) the system is in a steady state, and (3) the system is linear. The model is derived from the basic principles of physics and is used to predict the system's behavior under different conditions.

The model is used to predict the system's behavior under different conditions. The results of the model are compared with the results of the experiments to validate the model.

The results of the model are compared with the results of the experiments to validate the model. The model is used to predict the system's behavior under different conditions. The results of the model are compared with the results of the experiments to validate the model.

 Bus Stops

CIRCULATION

The street system in Clayton includes three standards: City, County and Rural. New streets built at the City standard include a full section with street, curb, gutter and monolithic sidewalk. Streets built to the County standard include street, curb and gutter. Streets built to rural standards may not have curbs, road side ditches, meandering pathways and parking bays. Older areas of town were built in the County with rural roads. These routes are extremely narrow, are poorly paved, and irregular in development. However, they maintain a sense of character due to the vegetation, the diversity of appearance, and limited setback.

In the development of new streets, alternative non-monolithic sidewalk concepts are desirable particularly in greenbelt area. In hillside areas where adequate right-of-way exists, the grade separation of streets and use of one-way streets can also provide a high degree of visual interest while reducing grading on the hillside. A split street concept is illustrated below.



Scenic Thoroughfares

SCENIC ROUTES

The scenic routes and corridors are those thoroughfares through Clayton indicated in Exhibit V-1. These routes have been selected due to the incidental and panoramic view of Mt. Diablo, the foothills surrounding Mt. Diablo and the border vegetation along the route.

Clayton Road

This route extends from Kirker Pass to the Town Center.

Marsh Creek Road

This route extends from the eastern limits of the planning area to the Town Center.

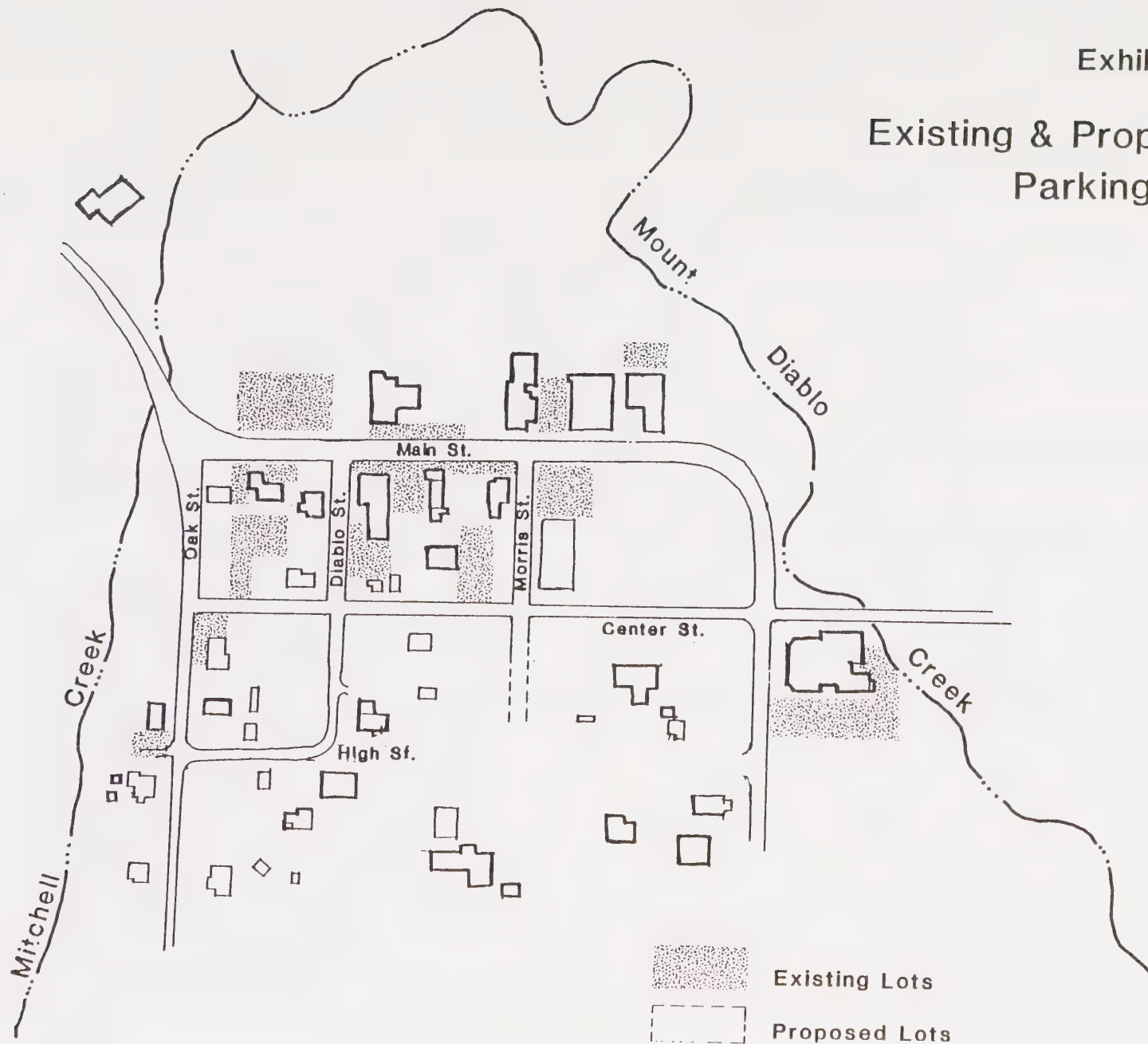
Concord Boulevard

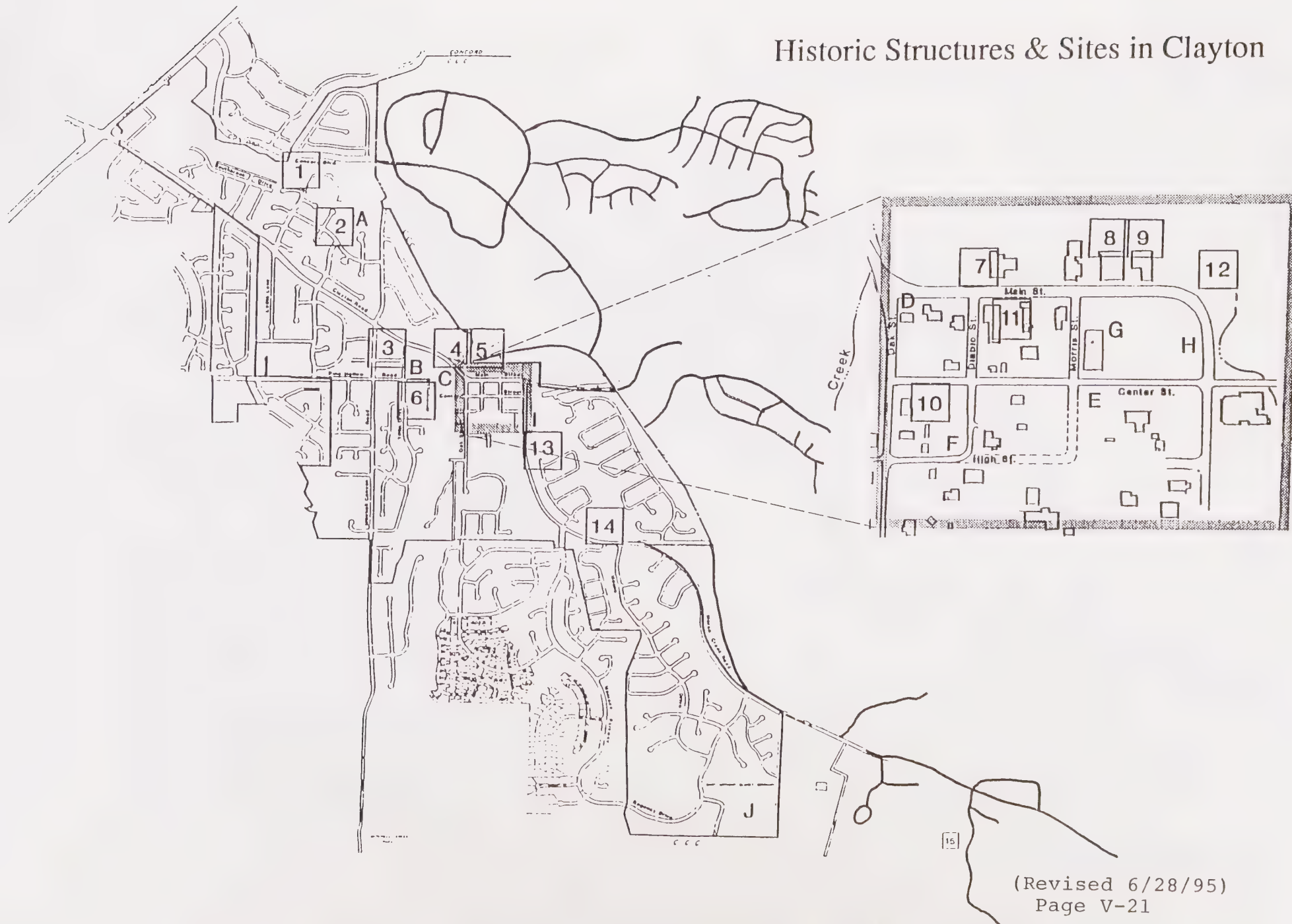
This route will extend from Kirker Pass to connect with Marsh Creek Road.

The scenic corridor concept is illustrated in Exhibit V-2.



Existing & Proposed Parking Lots





HISTORICAL BUILDINGS

1. Hurd Home (Yolanda Ranch Site)
2. Jeffry Homestead
3. Douglas Home (Clayton Road)
4. De Martini Winery
5. Keller Mansion (currently in County)
 - a. Foundation ruins of the Old Dairy Cellar of Joel Clayton's;
 - b. Mounds of Temescal;
 - c. Site of the two graves of Joel Clayton's children;
 - d. Barns and outbuildings;
 - e. Indian Temescal within the creek on property.
6. Will Frank home on Pine Hollow Road
7. Pioneer Inn (former stage stop)
8. Clayton Museum
 - a. Joel Clayton Home;
 - b. Pape House.
9. La Cocotte Restaurant
10. Endeavor Hall (Community Hall)
11. Clayton Club
12. Clayton Town Center Street Lamps
13. Stranahan Winery (Diablo Horse Center)
14. Easley Homestead
 - a. Mt. Diablo Winery
15. Llewellyn House

HISTORICAL SITES

1. Heritage Oak Trees on Four Oaks Lane
 - a. Trees on Jeffry property
2. Site of Mt. Diablo Elementary School
3. Bully Ingram's Cave Site (Oak and Main)
4. 6000 Main Street; site of Blacksmith Shop and First City Hall
5. Site of Congregational Church (Diablo and Center)
6. Dutch Trette House (Diablo and Center) old blacksmith
7. Keller and Doug Mitchell Home (site of Williams Market)
8. Eucalyptus Grove
9. Stranahan Farmhouse (Diablo Horse Center)
10. Seminary



EXISTING LAND USE

The land uses of the Town Center are provided in Exhibit V-4. The sites and structures with historic merit in the Town Center are indicated in Exhibit V-10. The structures should be preserved and restored to the extent possible since they provide a link to the past and promote a diversity of appearance. Vegetation must also be preserved. The tall trees contribute to the rural feel of the community as well as provide physical landmarks signifying the Town Center.

TOWN CENTER PLAN

The plan is indicated in Exhibit V-11. A series of uses will be incorporated into the plan. The primary designation will be Town Center (TC). It will permit the following uses:

Retail Commercial

Retail stores, specialty shops, convenience shopping facilities, restaurants, and service commercial.

Professional Office

Professional administrative offices, public and quasi-public facilities.

Accessory Uses

Medical and dental laboratories, printshops, storage facilities and similar supportive services. These uses will require review for compatibility with the retail/office functions of the Town Center.

Residential Uses

Second-story residential uses shall be permitted subject to review for design and compatibility.

Greenway

Comprising about 10% of the total Town Center area, the greenways along both Mitchell Creek and Mt. Diablo Creek are intended to serve several important functions within the Town Center area. Greenways provide identifiable open space entries to and from the Town Center. Their designation preserves the natural topography and tree cover within the riparian corridor, and greenways contain riding and hiking trails through the Town Center. Wherever possible, these areas should be either owned by the City of Clayton or controlled by the City through an open space easement. As greenbelts become part of public ownership and use, they will be maintained by the City as part of the Landscape and Maintenance Improvement District.

Open Space

Open space preservation must be incorporated into site plans to preserve significant trees, archaeological sites and areas adjacent to creeks.

Landscape

The most striking feature of the downtown area is the eucalyptus grove which requires maintenance to keep the trees healthy and prevent them from becoming a hazard or nuisance. Other area landscape has evolved haphazardly over the years. Thick clumps of mixed vegetation provide a unique flavor in contrast to the symmetric, manicured, sparse vegetation of other Central County communities. It is important that vegetation be drought resistant and planted where there is adequate space to expand.

OPEN SPACE/CONSERVATION ELEMENT

Goal

To maintain a system of active open space along stream channels and passive open space within hillsides as a means to preserve the rural character of the community.

Objective

1. To promote the City's greenbelts as the basis of its open space system.

Policies

- 1a Designate as greenbelt, stream channel areas for flood control setback, maintenance of riparian habitat and preservation of open space.
- 1b Designate as greenbelt, areas of significant vegetation, prominent features, or scenic beauty.
- 1c Provide non-motorized travel linkage to all areas of the community, to greenbelt paths, to schools, to activity centers and to areas of historical interest.
- 1d Promote City/regional mapping of Clayton greenbelt system and city-system linkages to State and regional parks and trails.
- 1e Keep improvements along greenbelts to a minimum but provide path improvements to minimize erosion, provide directional markings and create rest areas.

Objective 2

To develop neighborhood parks within the greenbelt system adjacent to other community facilities.

Policies

- 2a Continue requirement for parkland dedication for neighborhood parks that are compatible with the system of greenbelts.

- 2b Set aside neighborhood parkland where new school sites are identified to establish common facilities and help promote their use.
- 2c Review each park/greenbelt area for maintenance needs, and identify alternative methods to provide maintenance including home-owner associations, park districts, volunteer measures and dedication to State and regional park systems.
- 2d Consider establishment of a community park.

Objective 3

To establish an open space conservation designations to preserve natural resources, to manage resources, to provide for outdoor recreation, to promote health and safety and to ensure orderly growth.

Policies

- 3a Apply Public Park/Open Space designation to areas of public park and recreation facilities.
- 3b Cluster development in order to allow a Private Open Space designation on sites that pose natural limitations such as streams channel, earthquake fault, unstable soil or prominent hilltop or ridge, fire hazard areas, and ground water recharge areas.
- 3c Apply Agriculture designation to parcels planned to remain under the jurisdiction of Contra Costa County in agricultural usage.
- 3d Apply Quarry designation to the Lone Star quarry.
- 3e Utilize the environmental review process to evaluate habitat impacts of a project and identify appropriate mitigations. This review may be done on an area-wide basis, for example, as through the Marsh Creek Road Specific Plan.

Implementation Measures

1. Prepare a greenbelt path map for public information.
2. Develop pathway standards.
3. Obtain updated flood boundaries.
4. Investigate East Bay and State park fund applications, gift dedication, purchase and resale of property, district formation and scenic easements.
5. Identify distinctive natural and manmade features such as ridgelines, landmark trees, arroyos and rock outcroppings to be preserved.

OPEN SPACE/CONSERVATION SETTING

Clayton is located at the base of the north slope of Mt. Diablo. The Clayton Planning Area is bounded to the south by Mt. Diablo State Park and to the northeast by Black Diamond Regional Preserve. The northern and western boundaries are shared with Concord. In general, growth for the City of Clayton must be directed east. The northeastern area and the eastern area beyond the planning area includes rugged terrain with many sites designated by the County as Agriculture.

Several natural creeks run through Clayton that have been integrated into a greenbelt system of parks. This system allows park site expansion and connection to park facilities at points throughout the system.

CONSERVATION ISSUES AND CONCERNS

The size and location of the City of Clayton preclude many conservation concerns identified in Section 65302(d) of the Government Code. For instance, within the General Plan area of Clayton there is negligible hydraulic force to creeks; and there is no potential for harbor, fishing or marina. Within the planning area one can find varying soils, hillsides, creeks, woodland, a rock quarry and land subject to flooding.

When Clayton incorporated in 1964 the measure was largely fueled by the desire to protect the City's natural scenic resources. The City's conservation effort has focused on protecting the riparian corridor, limiting development on the Keller Ranch to less than half the site, and promoting acquisition of land to the State park.

In 1973 the City adopted its Master Trails Plan as an addition to the Recreation, Parks and Open Space Element of the Clayton General Plan. Since then information was updated by Contra Costa County in order to extend the Clayton Trails Plan to development areas considered by the County.

The initial purpose of the plan was to provide riding and hiking trails for Clayton area residents. The effect of this action was to preserve a riparian corridor for three creeks beginning at the city limits of Clayton and terminating at the Mt. Diablo State Park. Naturally, the alignment of the creeks through the Town Center will be difficult but the remainder of the alignment on Mt. Diablo, Donner, Mitchell, and potentially on Peacock Creek will be preserved.

The City owns title or has easement rights to most of the creeks and measures will be taken to acquire land to develop an unbroken chain of access from the City limits to the State Park. Specific locations of creeks, rights-of-way and easements is available at the Clayton City office. Riparian corridor protection provides protection to the entire watershed.

In the course of development of Keller Ranch and any smaller parcels, strict development control will be provided to prevent stream pollution or flooding. Flood improvements will be made in conjunction with the County Flood Control District and will be funded by developer fees and public measures such as a redevelopment agency or grant programs.

As indicated in the Safety Element, the City of Clayton is a participant in the Federal Emergency Management Agency Flood Control Program. As new areas annex, the City will extend engineering to those areas.

Both creek bank and foothill erosion are problems of concern to Clayton. In both cases, vegetation and construction solutions are employed. New development are required to implement erosion control plans and bank work along the creeks is periodically undertaken to limit loss of land and sedimentation.

The Lone Star quarry lies within Clayton's planning area but not its jurisdiction. The quarry was established in 1949 and sells varying sizes of high grade rock to independent contractors. There is very little complaint about the quarry because development has been limited in direct vicinity. There is continuous complaint about the trucks due to noise, speeding and rock spill. Clayton has been working with the quarry to remedy those problems. Clayton is also aware of the regulatory and protectionary measures granted the quarry by the Department of Mines and Geology.

OPEN SPACE ISSUES

The City of Clayton occupies approximately 2,400 acres of land. The Clayton sphere of influence extends to 3,800 acres of land. Within Clayton, open space falls into four categories: public park/open space, private open space, quarry and agriculture. Open space is necessary to the community despite the act that it does not promote maximum feasible development intimated by the Housing Element. It is easy to see in this case that without striking balance, the State's conflicting intent between open space and housing elements could force a jurisdiction into a conflict situation. In Clayton's case, the balance occurs by selecting infill lots and portions of large parcels that can most feasibly be developed while preserving creeks, view corridors, and areas of greatest geologic limitation.

As indicated in the previous section, the City has had a policy from incorporation to protect its creeks from development to the extent possible through dedication, acquisition, easement and design. The policy has been implemented at every approval. Standards for active open spaces within Clayton are as follows:

Developed Parks - (athletic fields, picnic areas, tot lots, etc.)	3 Acres per 1,000 population
Maintained Open Spaces - (Greenbelt and Trails, etc.)	7 Acres per 1,000 population
Total Active Open Spaces -	10 Acres per 1,000 population

OPEN SPACE DESIGNATIONS

The City of Clayton seeks to preserve open space and provide recreational opportunities to Clayton residents within the City limits. Four designations have been created to fulfill these goals: Private Open Space, Public Park/ Open Space, Quarry, and Agriculture. The following text describes these four categories:

1. Private Open Space (PR)

This designation includes privately-owned open spaces. Typical examples in Clayton include the Oakhurst golf course and areas where development has been clustered to retain open space. Other examples include private recreational facilities such as the riding club southeast of Clayton, the swimming pools at Marsh Creek Park Villas and Dana Hills, and the open space within Dana Hills and Westwood. These facilities allow individuals to expand their recreational opportunities at cost and benefit to the users rather than the public at large. Such facilities should be promoted so long as traffic, noise and other related impacts are mitigated.

Only open space development, recreation and preservation uses are allowed in this designation. Owners' potential rights to other types of development on these properties have been clustered on adjoining parts of some parcels.

2. Public Park/Open Space/Open Space and Recreational (PU)

This designation applies to open space and recreational lands under City, County or State jurisdiction. Such uses within the planning area include City-owned open space areas and developed neighborhood and community parks, creek corridors, Mt. Diablo State Park, and the Open Space areas within the Oakhurst subdivision (dedicated to the City). Allowable uses in this designation include trails, greenbelts,

playfields and parks, as well as accessory structures and uses normally auxiliary to them.

a. Regional Parks

Regional and State Parks offer a wide range of park and recreational facilities intended to serve large sections of population living in a metropolitan area. These parks generally provide for all-day or weekend visitors, contrasted with local parks, which are designed for shorter, more frequent use. There are fifteen regional/State parks located within an hour's drive of Clayton.

Some of the most beautiful and desirable areas in Mt. Diablo State Park are in the northern portion, adjacent to Clayton. The City will encourage the State to acquire land to the extent possible along the southern border of Clayton. The City will cooperate with the State in providing access to these facilities. To the northeast of Clayton lies Black Diamond Regional Preserve that is under the authority of the East Bay Regional Park District (EBRPD). The District has closed the Nortonville Road, which provided vehicular access to this facility, for security purposes. The trail is open to pedestrians, horses and bicycles. The County road extends from Black Diamond Regional Preserve to the City limits of Clayton. Public right-of-way does extend south to Mt. Diablo State park. It is possible to establish a trail/corridor between Mt. Diablo State Park and Black Diamond Regional Preserve that would be under the authority of the East Bay Regional Park District. Such trail/corridor would provide a physical and conceptual linkage between the regional parks and the City's system of greenbelts.

b. Greenbelts

Greenbelts occur as a result of creek preservation and provide an elongated or linear space incorporated into natural land forms along creeks and other predominant natural features. Greenbelts provide pathway areas for pedestrian, equestrian and bicycle travel. The pathways provide passive recreation. Additions can be made to the greenbelts to provide active recreation. Picnic areas, par courses and other facilities can be built into the systems through funds generated by new development, government programs, and regional park programs. The greenbelts also function as connections between major recreational facilities, residential neighborhoods, commercial areas and school sites. Greenbelts are acquired as flood control setback, as open space through density transfer in PUDs, through parkland dedication and through purchase by public agencies.

Housing along greenbelts should have sufficient setback and site planning so that greenbelts provide access to local streets, allow adequate police protection and prevent a "boxed in" feeling or appearance.

c. Community Park

The City has recently developed a 20-acre Ballfields/Community Park Complex. This complex provides three combination baseball/soccer fields and a fourth soccer field. The complex also has sports related facilities (parking, restrooms, concessions) and active play areas (picnic areas, play structures, tot lots). This park is adjacent to Diablo View Middle School and there is a joint use agreement for the fourth soccer field. Such joint use opportunities between park and school use should continue to be pursued in the planning and development of any new school facilities.

d. Neighborhood Park

Neighborhood parks most commonly range in size from 3 to 5 acres. They provide play equipment for children, paved courts, picnic tables, benches and fields for team play. The neighborhood park function under this description is fulfilled by the Lydia Lane Park and the playfield of Mt. Diablo Elementary School. Neighborhood park facilities include play equipment for children, paved courts, par courses, picnic tables, benches and fields for team play.

Some standard park facilities should be added to the greenbelt system. Facility areas will form activity nodes or concentrations within the passive system that will generate additional use.

3. Quarry (Q)

Uses allowed under this designation include quarries and accessory structures and uses normally auxiliary to them.

There are no quarries located within the City limits of Clayton; however, the Lone Star quarry is located on the southwestern edge of the community. The quarry produces high quality rock and gravel and the quarry has an expected life in excess of 50 years. There are two negative impacts generated by quarry operation. First, there are occasional blasts to separate the rock and secondly, there is an average of 160 trucks per day travelling along Mitchell Canyon Road. This figure is based on information obtained from Lone Star Quarry. The quarry has taken a series of measures to mitigate its effect upon Clayton.

The quarry is designated as a State resource and cannot be curtailed by local action. It is important to consider the effects of proximity to the quarry prior to granting any change in adjacent land use.

4. Agriculture (AG)

Many land owners in the Clayton planning area have entered into the Williamson Act contract with Contra Costa County. The contracts are self-perpetuating 10-year agreements that preclude non-agricultural development. Use of these County designations will reinforce the Preserve Designation used by the County and promote a conservation context to future development analysis on these sites.

Areas to the northeast and east of the City limits include rugged terrain that is primarily used as rangeland for livestock and other similar open uses. The City supports and encourages the

continuation of agriculture in these areas. Given the low intensity of agricultural activities, the City encourages large lot zoning of at least 20 to 40 acres to ensure agriculturally viable sized lots.

The purpose of the Agriculture designation is to preserve and protect lands capable of and generally used for the production of food, fiber, and plant materials. The title is intended to be descriptive of the predominant land-extensive agricultural uses that take place in these areas, but the land use title or description shall not be used to exclude or limit other types of agricultural, open space or non-urban uses.

Action Plan to Promote Open Space

1. PUD density transfer and cluster development.
2. Park dedication and in-lieu fees.
3. Support for State and regional parkland acquisition.
4. Flood control and environmental hazard setback and open space dedication.
5. City purchase of sites and greenbelt system links.
6. Development easements.
7. Prepare Appendix H, a Master Parks-Trails and Open Space Plan to unincorporated public open space access links and activity areas.

Potential Open Space Measures

1. Park fund applications.
2. Gift dedication.
3. Purchase - resale.
4. Lighting and landscape district formation.
5. Scenic easement.

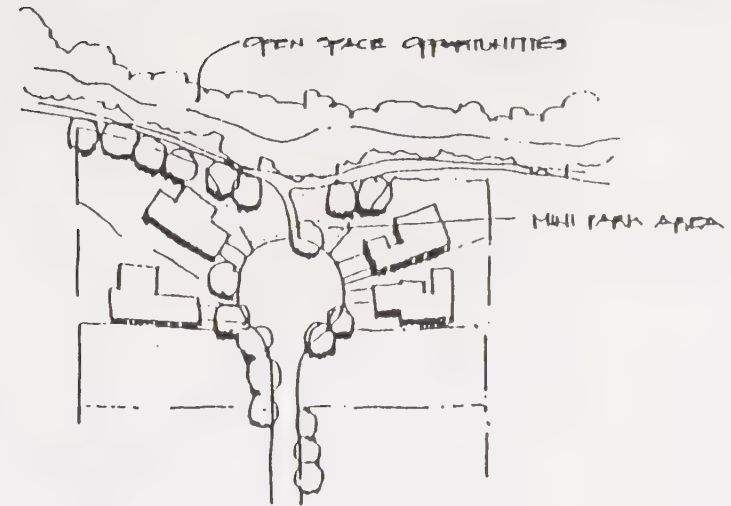
RELATIONSHIP TO OTHER ELEMENTS

As a major physical landform within the City, greenbelt concepts extend to policies within land use, circulation, safety/ seismic safety, community design and town center elements.

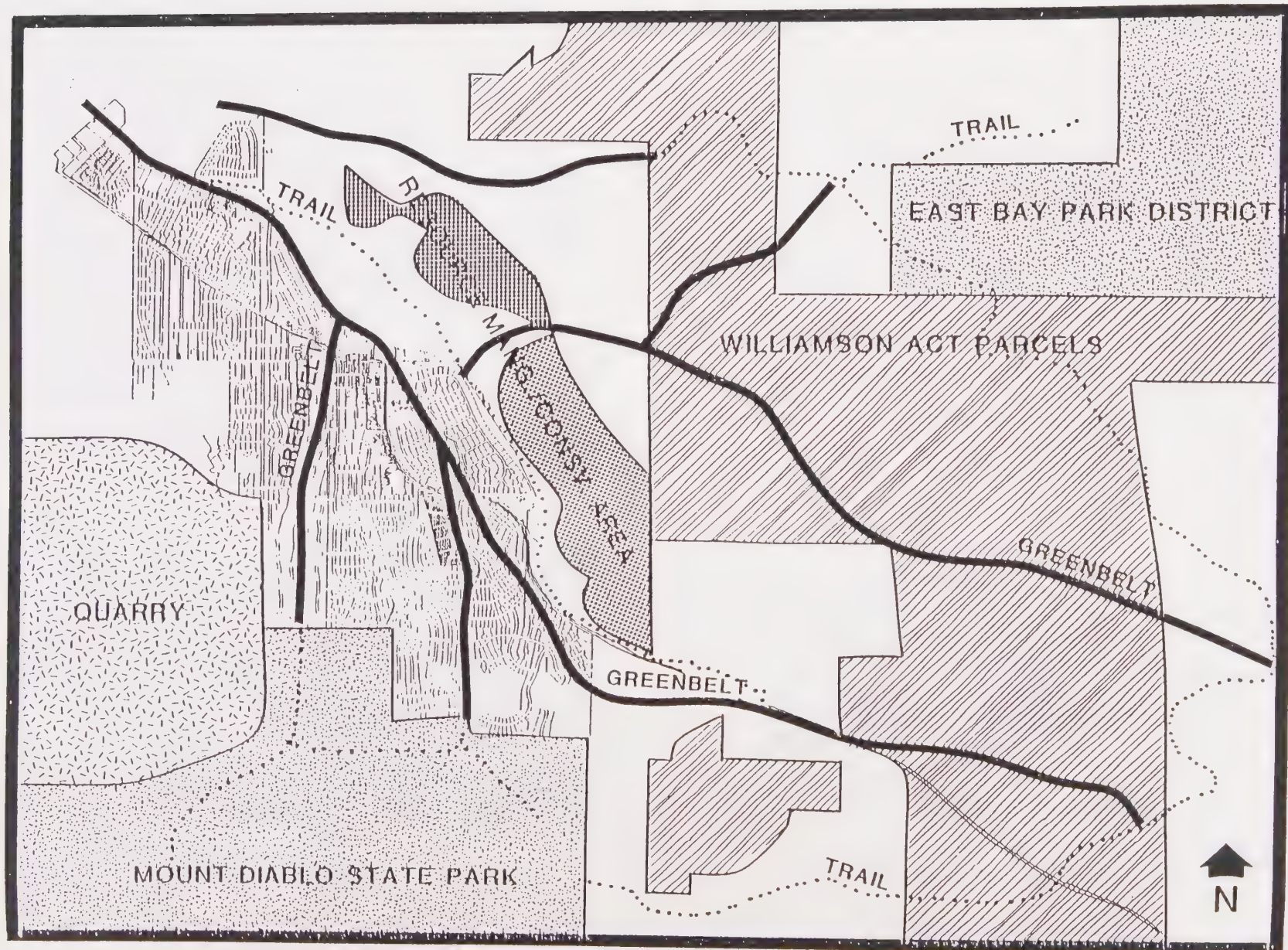
The greenbelt system must be integrated with the City's circulation system as a secondary non-motorized route. The greenbelt will augment scenic routes by providing landscape borders and corridors.

The greenbelt system is integrated with areas of hazard or development limitation identified in Open Space and Safety Element. The greenbelts provide a major factor in community design and in directing focus into the town center.

The use of the Open Space designation will provide support for and consistency with Safety Elements and Scenic Highway Elements.



Open Space & Greenbelt Areas



SAFETY ELEMENT

GOAL

To reduce potential risk to new development by proper planning and to minimize existing risk through coordinated City-County actions.

GEOLOGIC HAZARDS

Objective 1

To provide means to minimize geologic hazards to property from unstable hillside slopes and reclaimed areas.

Policies

- 1a Evaluate extensions of land uses into areas characterized by slopes of 15% and/or slopes indicating instability through geologic studies with regard to the safety hazard prior to land use decisions such as General Plan amendments, rezonings, or project approvals.
- 1b Restrict development on slopes over 26% as they are not suitable for types of development that require extensive grading or other land disturbance without adequate analysis.
- 1c Prevent contouring of slopes greater than 3:1 without special mitigation or circumstance.
- 1d Require hillside lots to be designed to provide a stable, buildable site and driveway and parking location.
- 1e Require roads constructed in slope areas to be engineered to standards to prevent excessive maintenance and repair costs.

- 1f Prevent slope cuts that may undermine the toe of the slope.

Objective 2

To reduce public exposure to geologic risk.

Policies

- 2a Identify boundaries of all known areas with geologic instability.
- 2b Designate as Open Space any area with severe geologic limitations which cannot be mitigated.
- 2c Require soils/geologic studies for any areas with potential risk of ground failure prior to development.
- 2d Prepare a constraints map(s) identifying the location of geologic constraints including slope instability, expansive soil and high erosion potential.
- 2e Cooperate with other jurisdictions to monitor changes in geologic conditions.

Objective 3

To reduce the potential for manmade hazards to interact with natural geologic hazards.

Policies

- 3a Consider the relationship between manmade hazards and existing geologic hazards in land use decisions.

- 3b Provide adequate protection to utility lines and pipelines placed in areas of geologic hazard.
- 3c Review placement of structures and facilities in areas of geologic hazard and the effects of construction and operation of those facilities.

Objective 4

To determine the level of risk that the community is willing to accept in the form of exposure and to identify and mitigate geologic hazards.

Policies

- 4a Prevent development that increases risk exposure to persons or existing development.
- 4b Identify the potential and level of risk for development located in areas of geologic or other constraints.
- 4c Develop a rigorous procedure of technical review and inspection of proposed mitigation measures in areas of geologic hazard.
- 4d Identify every potentially hazardous structure in the City, particularly critical facilities in high to medium risk areas for landslide, earth-shaking or flooding.

SEISMIC HAZARDS

Objective 5

To continue to pursue information regarding the location of faults within the planning area.

Policies

- 5a Establish a development constraints map(s) with all known information regarding fault location for development review.
- 5b Require identification and mitigation studies prior to development where there is probable cause to assume the location of a fault.

Objective 6

To provide adequate identification of potential seismic effects in relation to the setting for development.

Policies

- 6a Identify the extent of intensity of ground shaking from vicinity faults.
- 6b Identify areas susceptible to liquefaction.
- 6c Identify areas susceptible to subsidence.

Objective 7

To establish an appropriate level of risk mitigation to seismic activity.

Policies

- 7a Maintain seismic standards at a level of construction commensurate with the risk.
- 7b Prepare an inventory of structures where structural mitigation is necessary.
- 7c Establish a setback for development adjacent to the fault.

GEOLOGIC SAFETY SETTING

The undeveloped regions of Clayton contain a number of potential geological hazards. These include slopes with unstable expansive soil, high erosion potential, evidence of springs, mudflow potential, rockslide potential and evidence of significant creep.

While landslides may occur on slopes of 15% or less in unstable areas, the risk increases with steepness of slopes. Areas of old slide deposits are most subject to continued failure. Areas of potential slope hazard are indicated in Exhibit VII-1.

Grading without engineered requirements tend to reduce slope stability so that road cuts and the cut-and-fill pads typically prepared for hillside housing carry a greater risk of slope failure than undisturbed hillsides. However, fill slopes engineered to today's standards may result in a more stable situation than in nature, particularly where smaller slide deposits are improved or arrested.

Level to 15% slopes may be found in the downtown Clayton area, and to the area immediately northeast of Clayton Road. Much of this area lies on alluvial-type soil, which can amplify ground shaking. The seismic activity possible from area faults and the reaction of alluvial soils should be considered and studied in detail for any proposed development in these areas.

The foothill areas of Clayton contain slope stability problems which may be triggered by improper grading. In addition, foothill areas may experience local slope erosion, sedimentation or drainage problems, expansive soil reaction and other development limitations requiring corrective measures prior to any grading or construction. Ground rupture or slides along the general existing or suspected fault lines is also a possibility.

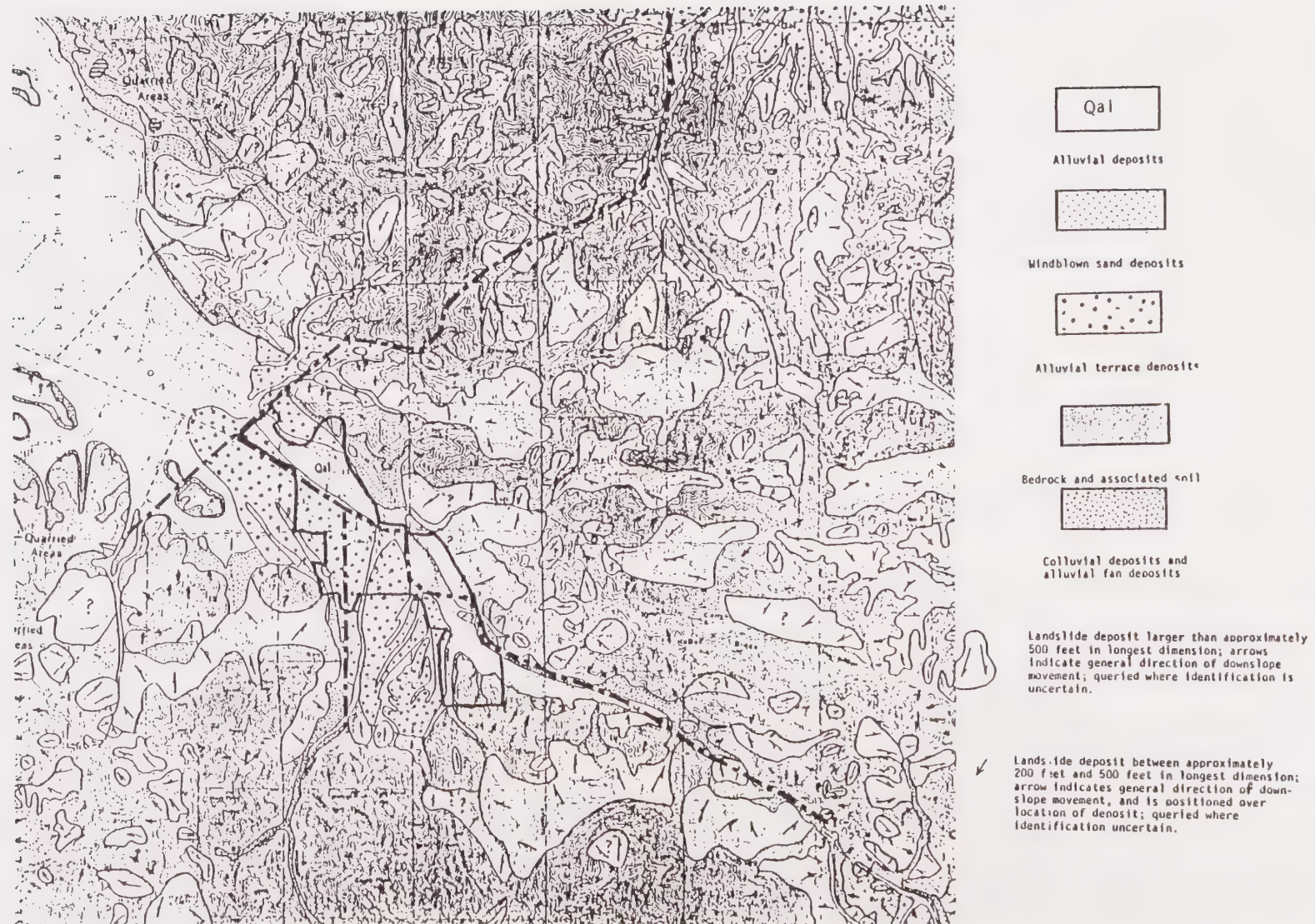
In slope areas greater than 15%, density should remain low. Development should be restricted by City policy for major slope areas in excess of 26%. Some development and slope correction will be permitted on slopes over 26% within the Keller Ranch and within the Marsh Creek Road Specific Plan areas subject to site-specific City review and the demonstration that such development is in conformity with any Specific Plan or other detailed conditions developed for the subject area, the development is not visible when viewed from developed portions of the City or from major road corridors, development does not intrude on the visual integrity of Mt. Diablo, and the development does not displace any sensitive plant or animal species, riparian corridors or wetlands. In no case will development be allowed on slopes in excess of 40 percent.

The following geological concerns are considered in greater detail in Appendix E:

- a. Geologic structure of the Clayton planning area.
- b. Geologic hazards including landslides, expansive soils, liquefaction and springs.
- c. Earthquake faults.



Slope Hazards



MEASURES OF SEISMIC ACTIVITY

Earthquakes are measured in two ways, by their physical effects and by the amount of energy released. The scale used to measure intensity (physical effects) of an earthquake is the Modified Mercalli Scale, and the scale used to measure the magnitude of earthquakes (energy released) is the Richter Scale. Mercalli and Richter scales will be described in greater detail in Appendix E.

The intensity of the physical effects of earthquakes are based on human reactions. At the low end of the Modified Mercalli Scale is the reaction "felt indoors."

SEISMIC ACTIVITY AFFECTING CLAYTON

The probability of an earthquake originating in Contra Costa County that is "felt indoors" is low to intermediate. Solid ground or rock tends to lessen ground motion due to earthquakes, while poorly consolidated or water-saturated soils tend to amplify it. The probability of earthquake effect must be measured against the bedrock and soils outlined above. Areas sitting on hard bedrock, such as the Mt. Diablo range, can be expected to perform satisfactorily under earthquake conditions, except where steep slopes, exposed or sheared surfaces and relatively unconsolidated soils might make slumping or landslides possible. The potential for physical effects is more highly probable as a result of earthquakes originating outside the County.

The most critical faults locally, according to Woodward and Lundgren, are the San Andreas, Calaveras and Hayward faults, due to their recent activity and energy potential. Nevertheless, the Antioch and Concord faults recently have produced damaging earthquakes, the latter with a

5.4 magnitude in 1955. Prominent faults of undetermined status include the Pinole, Bollinger, Las Trampas, Franklin, South Hampton, Clayton - Marsh Creek, Midland, and Mt. Diablo Faults (See Exhibit VII-2). These faults have shown inconclusive signs of activity or are associated with geologic processes and features which could result in earthquakes.

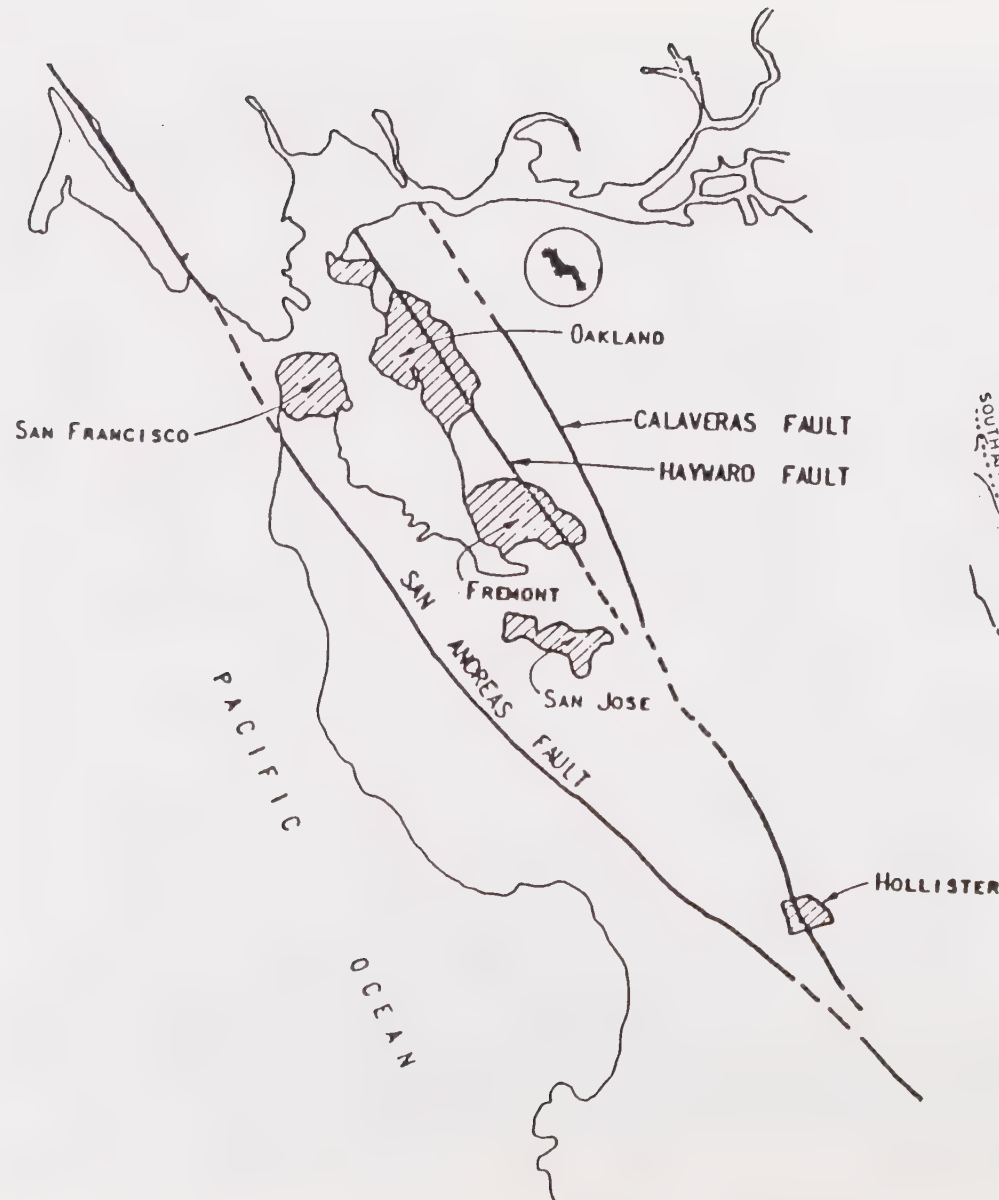
In addition there is a system of radial and concentric faults surrounding Mt. Diablo not known to be active but were created by the mountain uplift. This process still continues and its effects may become more pronounced.

The Concord fault is known to be active. It is a creeping fault, and small to moderate quakes are possible along the fault, with the capability of a 7+ magnitude.

Clayton Valley does contain alluviated areas which could amplify ground shaking in the event the Concord fault shifts. The entire area is considered seismically active, and development plans should reflect this risk factor. Soil types, topography and bedrock may serve to heighten risk or dampen it. The presence of contained water bodies within these seismically active areas raises seiches as potential hazards, which should also be addressed in development plans. The Clayton fault alignment is indicated in Exhibit VII-3. The fault is not classified as active; however, there is preliminary evidence that the fault may have displaced recent landslide materials. Due to this the fault should be treated as active unless evidence proves otherwise. The fault does not fall within the Alquist-Priolo requirements.

Seismic activity is presented in greater detail in Appendix E.

Regional Faulting



capacity to carry the estimated 50-year frequency runoff event with standard freeboard and the 100-year event without overtopping the banks. Other objectives include the following:

- a. Keep the extent of right-of-way acquisitions and the relocation of residents to a minimum.
- b. Minimize channel improvement costs in order for the project to be feasible.
- c. Design channel improvements to be as environmentally and aesthetically acceptable as possible.

Presently, flood protection measures are some earthen levees in the housing tract north of Clayton Road downstream from the confluence of Mitchell and Mt. Diablo Creeks and at the Westwood development where the creek was widened.

Flood protection can be achieved in two ways. The first is to determine the extent of the 100-year flood and to establish that area as setback for any uses that will be adversely affected by inundation. Encroachment into flood plains by placement of fill reduces the flood-carrying capacity and increases flood heights, thus increasing flood hazards in areas beyond the area of the specific encroachment. Such encroachment is prevented under the flood insurance program. An aspect of flood plain management involves balancing the economic gain from flood plain development against the resulting increase in flood hazard. The National Flood Insurance Program uses the concept of a floodway as a tool to assist local communities in the setback aspect of flood plain management. Under this concept, the area of the

100-Year flood is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent flood plain areas that must be kept free of encroachment in order that the 100-Year flood be carried without substantial increases in flood heights. As minimum standards, the Federal Insurance Administration limits such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced. Flood fringe is the area that becomes ponded in event of bank overflow. Development can occur in these areas under restrictions and with flood insurance.

The second method of flood control is to provide creek alterations that will increase capacity. Structures and alterations include concrete block energy dissipators, concrete channels, drop structures, berms, earth channels, culverts, inlet structures and similar measures. The Contra Costa County Flood Control District prepared an engineering report and a series of design alternatives in August, 1983 to be considered and implemented by the cities of Clayton and Concord.

As part of the General Plan Implementation process, it will be necessary for the City of Clayton to establish an overall flood control plan and continue to participate in the Federal Flood Insurance Program and to require project EIRs to identify contribution to flooding and provide adequate mitigation. Since the county does not participate in the regular program there are no corresponding FIRM maps for the Keller Ranch. As a part of approval, Clayton's FIRM maps will have to be expanded.

REVISED 5/6/87

Gravel truck noise is characterized by fluctuation in frequency and duration. These changes are caused by the varying demands for the aggregates extracted by the quarry and the consequent variations in the amount of gravel truck traffic. Truck noise is further characterized by the fact that it occurs along a specific route, and the noise problems of the community are intense along this route.

Truck and automobile noise are additionally intensified in the City because of the existing cross-town thoroughfare, Clayton Road, which must serve as the truck as well as passenger car through route to eastern Contra Costa County. There appears to be no alternative truck route in the future.

Further compounding the problem of mobile noise along Clayton Road is the fact that this street must serve as the only through access for emergency vehicles with the attendant siren noise.

It should be noted that the identification, measurement, and examination of noise problems, whether from mobile or fixed point sources, is critical to the considerations of future land use planning. While problems for people who live in the existing homes may be minimized by the enforcement of the proposed ordinance, the problems of noise for future residents can better be addressed by appropriate planning and design. There have been two complaints regarding noise on Clayton Road in the past year. Based on noise contours it can be estimated that two parcels fall within the existing 70 Ldn contour and 51 parcels will fall within the contours projected for 1995. A total of 143 parcels currently fall between the 70 and 60 Ldn contour and 109 parcels will fall within the contour at 1995 levels. These contours identify base noise levels. They do not take into account mounding, changes in elevation,

walls or other measures that will affect noise factors for specific homes. Individual homes can benefit from element information in general but site specific monitoring is necessary prior to action. Noise prediction will be affected by future population levels, street design and vehicle equipment standards. Concord Boulevard will not be included until population is projected.

Data deriving from the survey are presented in Appendix F. Previous noise study data is also included.

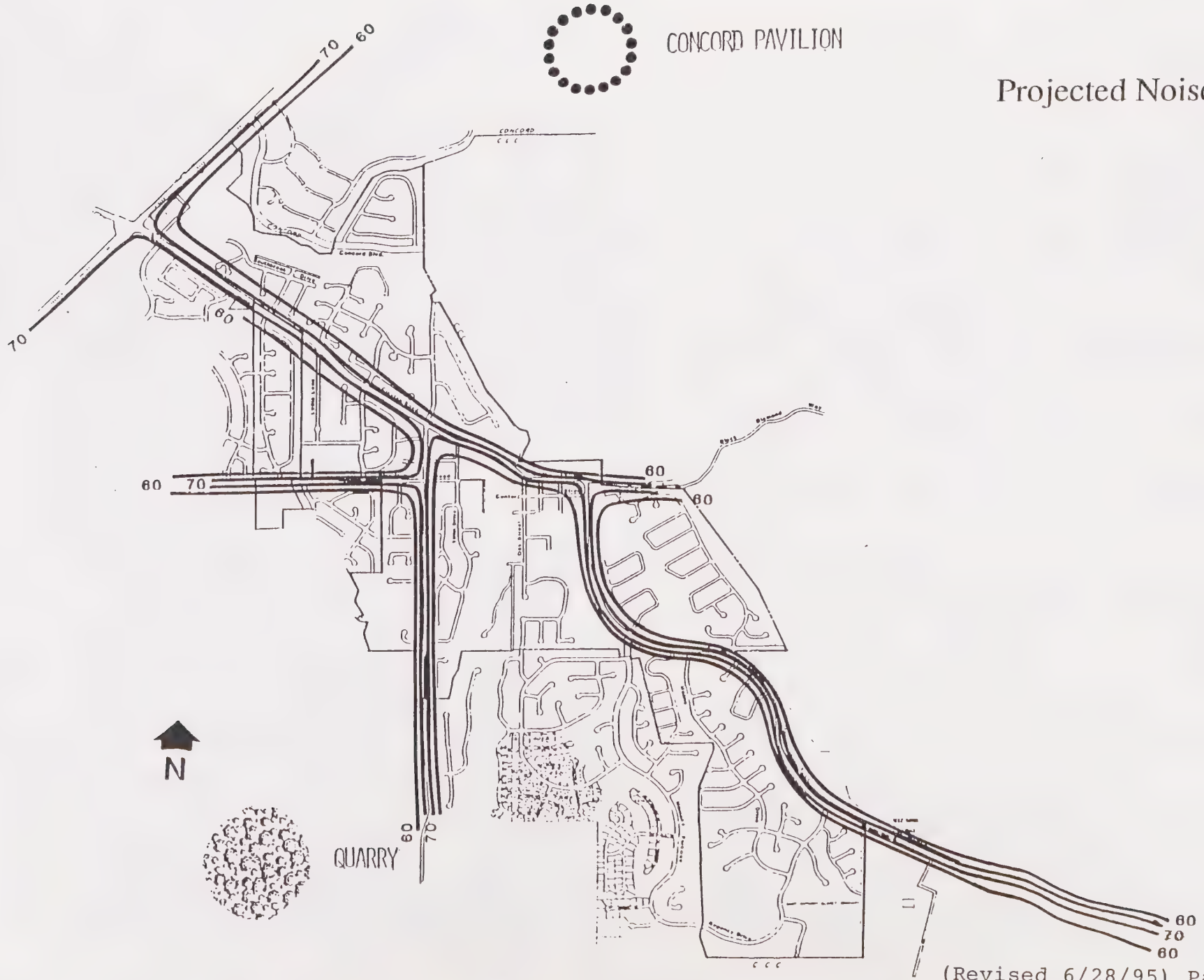
Critical Routes

The areas where existing and/or potential noise impacts are determined to have potentially severe impact on individuals that can be classified as critical are as follows:

1. The Clayton Road-Marsh Creek Road thoroughfare, including the Main Street traffic through the Town Center area of Clayton.
2. Mitchell Canyon Road, which is the gravel truck route from Lone Star Quarry.
3. The proposed Concord Boulevard extension between Silver Creek II subdivision and the intersection with Marsh Creek Road.
4. The proposed extension of Marsh Creek Road to the connection with the Concord Boulevard extension just east of the downtown area.
5. The proposed extension of Center Street to connect with the Concord Boulevard extension.

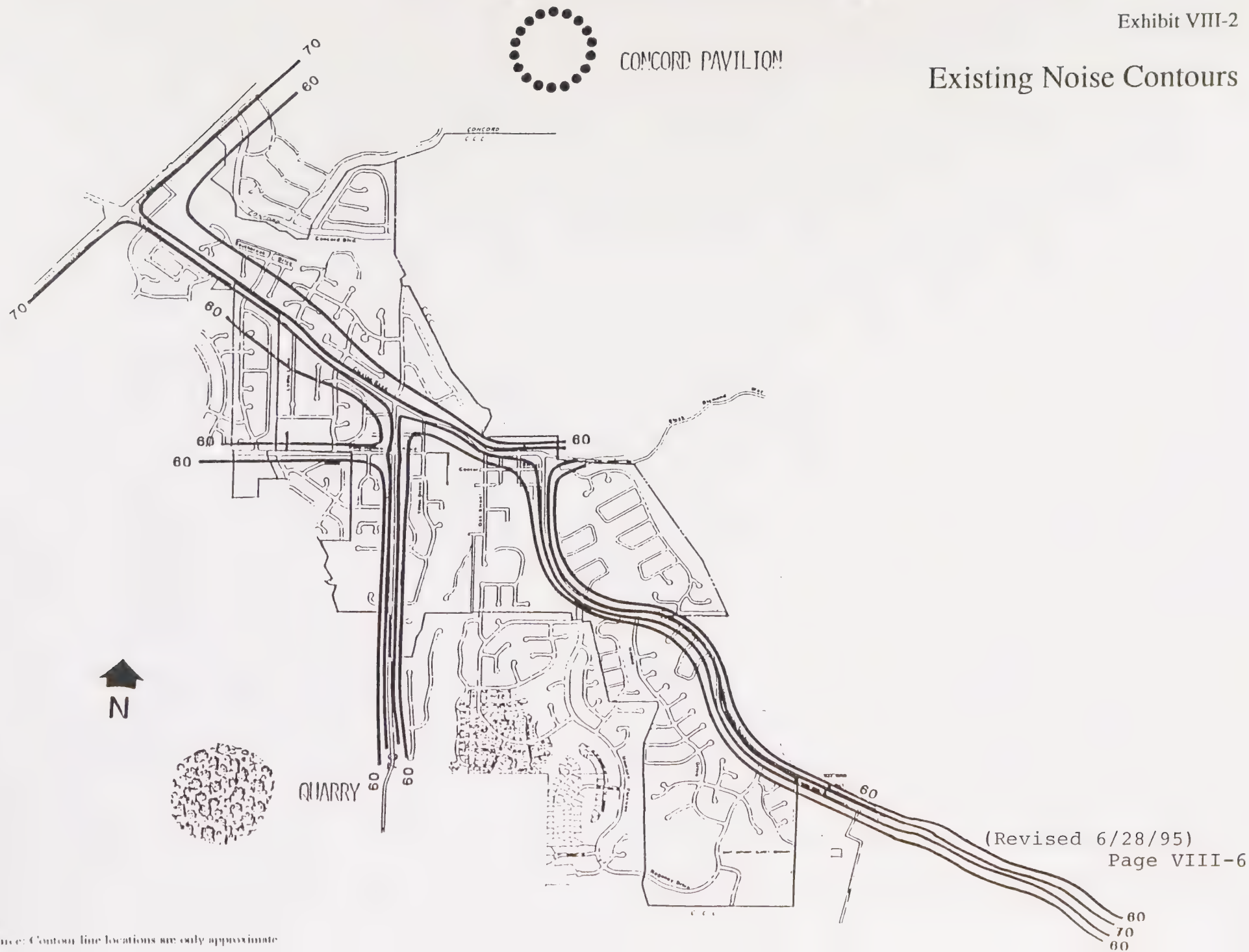
CONCORD PAVILION

Projected Noise Contours 1995



(Revised 6/28/95) Page VIII-5

Existing Noise Contours



(Revised 6/28/95)
Page VIII-6

Source: Contour line locations are only approximate.

CITY OF CLAYTON NOISE CONTOURS

Exhibit VIII-3

(Distance from Centerline of Roadway in Feet)

	1985				1995			
	55	60	65	70	55	60	65	70
Clayton Road between City Limit at Atchinson Stage Road	300	150	65	30	600	200	140	60
Clayton Road between Atchinson Stage Road and Mitchell Canyon Rd.	200	100	45	20	390	180	80	40
Clayton Road between Mitchell Canyon Road and Oak Street	79	37	15	10	85	40	19	10
Mitchell Canyon Road at Mitchell Canyon Court	130	65	30	15	200	90	45	23
Clayton Road from Oak Street to Mountaire Parkway	80	33	16	10	86	41	20	10
Clayton Road/Marsh Creek Road/ Mountaire Parkway to Regency Drive	95	50	22	10	110	55	27	15
Marsh Creek Road east of Regency Drive	93	48	20	10	108	53	25	13
Pine Hollow Road at Mitchell Canyon Road	80	40	19	0	100	45	20	0
Concord Boulevard from Kirker Pass Road to end	160	78	35	18	N/A			
Concord Boulevard from Kirker Pass Road to Marsh Creek Road	N/A				300	150	70	30
Concord Boulevard south of Marsh Creek Road	N/A				250	120	58	25

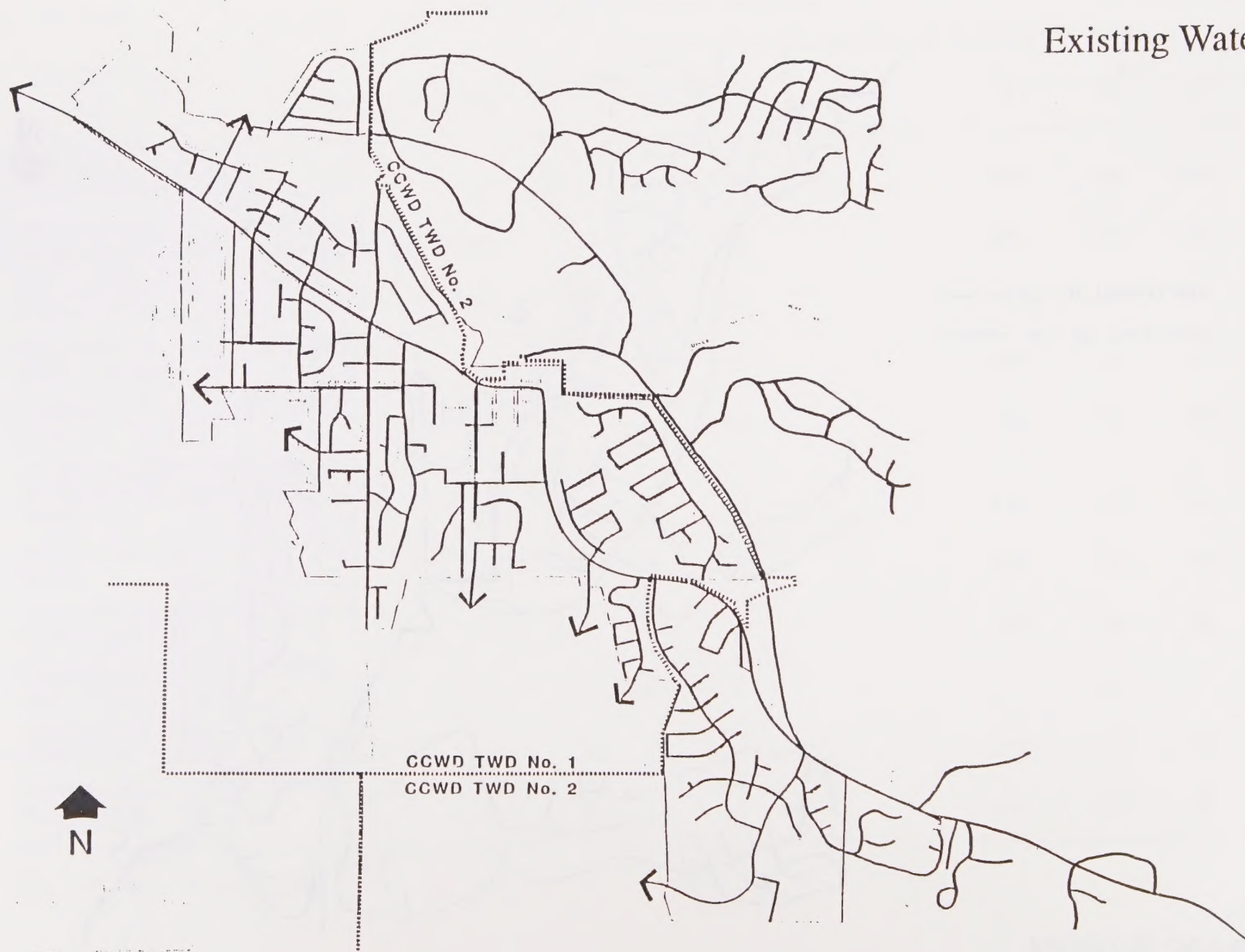
All contours shown in Ldn

Existing Sewer Lines



- 12" - 18" Truck Lines
- 8" - 10" Lateral Lines

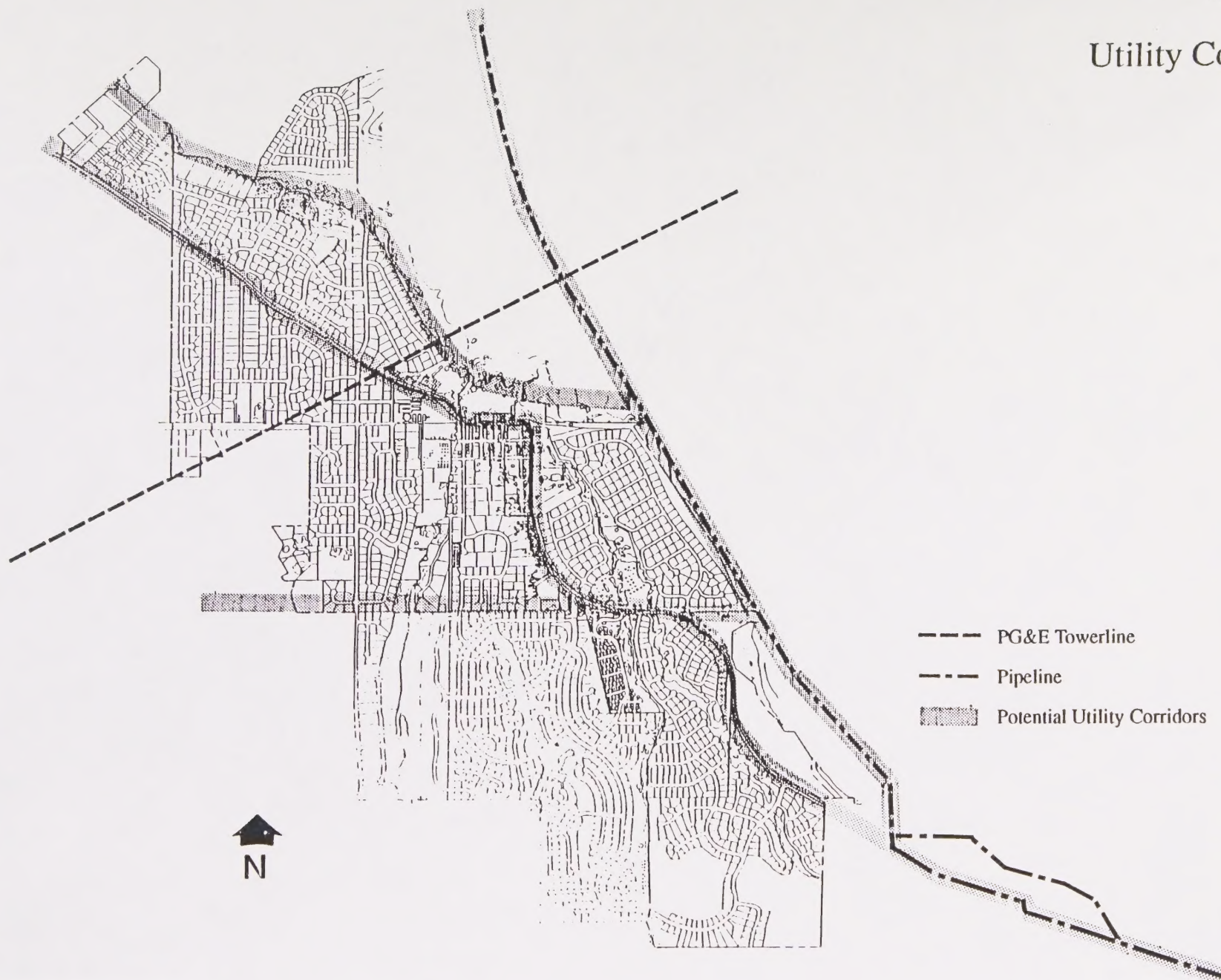
Existing Water Lines



Source: Contra Costa Water District -Maps

(Revised 6/28/95) Page IX-5

Utility Corridors



Public Land & Facilities

